

ORIGINAL OPEN MEETING
MEMORANDUM



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Arizona Corporation Commission

TO: THE COMMISSION

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DOCKETED

FROM: Utilities Division

AZ CORP COMMISSION
DOCKET CONTROL

OCT -1 2014

DATE: October 1, 2014

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RE: TUCSON ELECTRIC POWER COMPANY—IN THE MATTER OF ITS
APPLICATION FOR APPROVAL OF ITS 2014 AND 2015 ENERGY
EFFICIENCY IMPLEMENTATION PLANS AND FOR WAIVER UNDER
A.A.C. R14-2-2419 (DOCKET NO. E-01933A-13-0183).

Background

On July 3, 2013, Tucson Electric Power Company ("TEP" or "the Company") filed an application for approval of its 2014 Energy Efficiency Implementation Plan ("Plan") and for a waiver of the Energy Efficiency ("EE") Standard under A.A.C. R14-2-2419. The Plan proposes new measures and programs and the discontinuance of some measures, discussed further herein. The Plan also includes a notification that the Residential and Small Commercial Demand Response Program would be removed from TEP's portfolio following the pilot program. In addition, the Plan proposes to make other modifications, such as moving or revising program components.

2015 Plan. On June 3, 2014, TEP filed a notice in this Docket that the 2014 Energy Efficiency Plan filed on June 2, 2013, "should also be considered the 2015 Implementation Plan." No changes to the budget or programs were proposed. The notice also included information regarding the impact on compliance with the EE Standard of the exemption requested by Freeport McMoRan.

Freeport McMoRan Exemption. On March 17, 2014, Freeport-McMoRan Copper & Gold, Inc. ("Freeport") filed an application requesting exemption from TEP's Demand-side Management Surcharge. The impact of the requested exemption on TEP compliance and on customer bills is discussed further herein.

Demand-side Management ("DSM") Surcharge Reset. TEP noted that it is not requesting a reset of the existing DSM Surcharge as a part of this Plan. Although a reset is not required at this time, Staff believes that the DSM Surcharge should be reset to reflect the requested budget, the significantly decreased under-collection, and the potential effect of granting Freeport exemption. The DSM Surcharge reset is discussed further herein.

Rate Case Decision Regarding Status Quo. In the most recent TEP rate case (Decision No. 73912, June 27, 2013), the Commission ordered that the Company maintain the status quo with respect to its EE programs. The Decision stated the following:

“Regardless of the mechanism for recovering approved EE/DSM Program costs, we find that only the proposed EE/DSM Programs and budgets adopted in the Settlement Agreement, and which have already been approved by the Commission in previous decisions, should be approved.”

Rate Case Decision Regarding Budget. Decision No. 73912 also approved a budget of \$21 million. This budget was based on the one proposed in Exhibit TEP-11 from the rate case, but modified to reflect the Decision’s order (cited above) to maintain the status quo with respect to programs.

Appendices

Existing and proposed programs will be discussed herein. Three Appendices are attached that provide data on the individual measures.

- Appendix 1-A, Cost-effectiveness. Appendix 1-A lists the existing programs and measures alphabetically, along with the updated Staff benefit-cost ratio, and the total incentive amount associated with that measure. (Cost-effectiveness was recalculated for all measures)
- Appendix 1-B, Cost-effectiveness. Appendix 1-B lists the proposed programs and measures alphabetically, along with the Staff benefit-cost ratio, and the total incentive amount associated with that measure.
- Appendix 2, Measure Detail Description. Appendix 2 lists the existing and proposed programs, the associated measures (also alphabetically) and provides a description of the individual measures.
- Appendix 3, Approving Decisions and Benefit-Cost Ratios, Existing Measures. Appendix 3 lists the Decisions in which existing measures were approved, along with the benefit-cost ratios from those Decisions.

Programs Discontinued or No Longer Proposed

Residential Financing. TEP is no longer proposing a Residential Financing Program. To be cost-effective, the Program would have to be offered in all of UniSource’s territories. Since the Program was discontinued by UNS Electric (Decision No. 74599, July 30, 2014), and not approved for UNS Gas (Decision No. 73939, June 27, 2013), TEP chose to remove it from its 2014 list of programs.

Residential and Small Commercial Demand Control pilots. The Residential Demand Control Pilot Program was discontinued, as was the Small Commercial Demand Control pilot, although commercial customers with 100 kW or more of demand are eligible to participate in the Commercial Demand Control Program. (100 kW or more of demand is required in order to be cost-effective.) TEP states in its application that it:

“has decided not to offer a mass market Direct Load Control (“DLC”) program and is not requesting any budget approval in this EE Plan. TEP does not need this technology at this time to ensure safe and reliable service, and its contribution to the EE Standard is better met through TEP’s Commercial and Industrial (“C&I”) DLC program.”

Home Energy Reports. In addition, the Home Energy Reports Pilot Program was put on hold. TEP states in its progress report for 2013 that although cost-effective for TEP, it was not cost-effective, or approved, for UNS Electric. TEP notes that the Program could not utilize economies of scale and that customers complained that the reports were being delivered on an unsolicited, or opt-out, basis. Customers also questioned the accuracy of the reports. TEP proposes to maintain funding because it is planning to find another delivery model that will provide higher savings and better consumer satisfaction.

Discontinued Measures. Additionally, in its Plan, and following an update of avoided costs, TEP found a small number of proposed and existing measures to be non-cost-effective and is no longer offering them. Staff has also recommended that these measures not be included in the Company’s EE portfolio. These include the following:

- Behavioral Comprehensive Program—In Home Display Pilot (Proposed)
- C&I Comprehensive—LED Pedestrian Signals (Proposed)
- C&I Comprehensive—LED Street Parking Lights (Existing)
- C&I Comprehensive—Bi-Level Lighting (Proposed)
- C&I Comprehensive—Night Covers (Existing)
- C&I Comprehensive—T8 to T8 (Existing)
- Small Business Direct Install and C&I Comprehensive—Night Covers (Existing)
- Small Business Direct Install and C&I Comprehensive—T8 to T8 (Existing)

TEP has withdrawn its request (shown in Table 3.3 of the Plan) to suspend the following measures. TEP now considers these measures cost effective. (The below measures were broken out into six related measures. Those offering at least 50% reduction in leakage passed Staff’s cost-effectiveness review, while those offering at least 14% did not achieve a benefit-cost ratio of 1.0.)

- Existing Homes and Audit Direct Install--ROB_HVAC with QI and Duct Sealing_Electric (Performance)
- Existing Homes and Audit Direct Install--ROB_HVAC with QI and Duct Sealing_Dual Fuel (Performance)

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Proposed Budget

The budget proposed by TEP is shown below. It has been revised since the June 3, 2013, filing to reflect removal of the Residential Financing program, actual program activity levels, and the proposed combination of the previously separate Small Business Direct Install and School Facilities into a single program. (School Facilities was originally proposed as a separate program.) At \$18.8 million it is below the budget level set within the rate case.

TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET

Program	Status	Incentive	Delivery	Marketing	Administration	Measurement	Total
Residential Sector		\$5,676,726	\$1,259,950	\$458,525	\$224,313	\$217,735	\$7,837,249
Efficient Products	Existing	\$1,832,659	\$415,813	\$143,390	\$90,303	\$65,754	\$2,547,919
Appliance Recycling	Proposed	\$90,000	\$174,535	\$143,293	\$26,215	\$29,846	\$463,889
Residential New Construction	Existing	\$1,050,000	\$57,000	\$75,000	\$61,575	\$52,628	\$1,296,203
Existing Homes	Existing	\$2,300,000	\$594,527	\$68,451	\$23,971	\$47,003	\$3,033,952
Shade Trees	Existing	\$150,500	\$0	\$4,919	\$6,849	\$2,364	\$164,632
Low-income Weatherization	Existing	\$232,800	\$6,500	\$15,591	\$11,678	\$16,526	\$283,095
Multi-family	Proposed	\$20,767	\$11,575	\$7,881	\$3,722	\$3,614	\$47,559
Commercial Sector		\$3,550,674	\$2,031,018	\$505,361	\$332,014	\$216,787	\$6,635,854
C&I Comprehensive	Existing	\$1,856,108	\$860,523	\$203,428	\$160,141	\$93,286	\$3,173,486
Commercial New Construction	Existing	\$217,200	\$82,443	\$34,220	\$15,509	\$11,293	\$360,665
Bid for Efficiency Pilot	Proposed	\$60,000	\$74,052	\$15,502	\$8,901	\$7,503	\$165,958
Retro-commissioning	Proposed	\$88,000	\$27,500	\$6,423	\$5,633	\$5,935	\$133,491
Small Business Direct Install & School Facilities	SBDI Existing//S F Proposed	\$1,329,366	\$984,000	\$245,788	\$141,742	\$98,770	\$2,799,666
CHP Program	Proposed	\$0	\$2,500	\$0	\$88	\$0	\$2,588
Behavioral Sector		\$235,800	\$428,318	\$75,000	\$42,531	\$84,934	\$866,583
Behavioral Comprehensive	Proposed, with existing components	\$235,800	\$196,000	\$75,000	\$30,042	\$32,033	\$568,875

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Home Energy Reports	Existing	\$0	\$232,318	\$0	\$12,489	\$52,901	\$297,708
Support Sector		\$0	\$977,886	\$485,000	\$36,209	\$52,901	\$1,551,996
Consumer Education and Outreach	Existing	\$0	\$98,000	\$485,000	\$23,720	\$0	\$606,720
Energy Codes and Standards	Proposed	\$0	\$104,886	\$0	\$12,489	\$52,901	\$170,276
Program Development, Analysis and Reporting	Existing	\$0	\$775,000	\$0	\$0	\$0	\$775,000
Utility Improvement Sector		\$0	\$388,482	\$0	\$16,850	\$22,768	\$428,100
Conservation Voltage Reduction	Proposed	\$0	\$363,482	\$0	\$15,746	\$20,168	\$399,396
Generation Improvement and Facilities Upgrade	Proposed	\$0	\$25,000	\$0	\$1,104	\$2,600	\$28,704
Demand Response Sector		\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
C&I Direct Load Control	Existing	\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
Total		\$9,463,200	\$6,505,654	\$1,523,886	\$711,896	\$635,125	\$18,839,760
Total Percentage of Budget		50.2%	34.5%	8.1%	3.8%	3.4%	100.0%

Overall Recommendations

During the June 11, 2013 Open Meeting, the Commission directed that a generic Docket (Docket No. E-00000XX-13-0214) be opened to address DSM and EE. The Commission indicated a desire to review the effectiveness of existing DSM and EE programs and measures before approving new ones and only approved recently-filed DSM/EE Plans for certain utilities as they related to the plans' "status quo" (i.e. new programs and/or modifications and/or enhancements to existing programs were not approved). It is reasonable to maintain the status quo for the TEP 2014 and 2015 Energy Efficiency Plan, with the exception that measures which are no longer cost-effective should be removed from the portfolio and that the overall budget can be adjusted to reflect these removals.

Staff recommends that TEP maintain its budget at the requested \$18.8 million. Staff recommends that TEP have the flexibility to move funding between cost-effective programs and measures, with the exception of the Low-income Weatherization Program, as long as funding is restricted to cost-effective programs and measures and is divided as evenly as reasonably possible between Residential and Non-residential customers.

Programs

The portfolio summary, below, lists and describes all the Programs, and describes proposed changes to existing programs.

PROGRAM DESCRIPTION – TABLE 2 (Residential)

RESIDENTIAL SECTOR			
Program Name	Existing or proposed	Summary Description	Summary of Proposed Changes
Appliance Recycling	New (Proposed)	Removes and recycles inefficient refrigerators and freezers.	New program.
Multi-Family	New (Proposed)	Promotes direct install of energy efficient measures at apartment complexes consisting of five or more units.	New program.
Efficient Products	Existing	Program currently promotes CFLs. The Company has proposed including Residential LEDs, advanced power strips, and energy efficient pool pumps and timers and energy- efficient appliances.	Request to add new measures.
Low Income Weatherization	Existing	Assists in making low-income homes more energy efficient.	Increase for eligibility to 200% of Federal Poverty Level ("FPL").
Residential New Construction	Existing	Promotes the building of more efficient new homes.	Notification that baseline EE standards/costs updated to reflect 2012 IECC. Tier 2 and 3 Homes eliminated.
Existing Homes and Audit Direct Install	Existing	Promotes energy efficiency in existing homes.	Notification that Audits and HVAC improvement delivery have been redesigned to make them more

			cost-effective.
Shade Tree	Existing	Promotes planting of desert-adapted shade trees in locations designed to enhance energy efficiency.	Notification that savings and incremental cost have been updated. No other modifications.

PROGRAM DESCRIPTION – TABLE 3 (Commercial)

COMMERCIAL SECTOR			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Bid for Efficiency – Pilot	New (Proposed)	Customers or project sponsors develop a holistic EE project then bid competitively for incentives within broad program guidelines.	New program.
Retro-Commissioning	New (Proposed)	Promotes using a systematic approach in existing buildings to identify building equipment or processes that are not achieving optimal performance or results in an existing facility.	New program.
CHP Program – Pilot	New (Proposed)	Promotes combined heat and power plants in existing facilities to reduce electric consumption.	New program.
Small Business Direct Install and Schools Facilities	Existing/New (Proposed)	Promotes installation of EE equipment at commercial customer's facilities and at schools by reducing out-of-pocket costs. Encourages customers to promote the Program by paying contractors the incentives.	Request to add new measures.

C&I Comprehensive	Existing	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to provide turn-key installation services to business customers.	Request to add new measures.
Commercial New Construction	Existing	A re-branding of the Efficient Commercial Building Design Program intended to assist customers in designing and constructing energy efficient buildings.	No modifications.

PROGRAM DESCRIPTION – TABLE 4 (Behavioral)

Behavioral Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Behavioral Comprehensive	K-12 and community education measures are existing. Other components are proposed (new).	A variety of educational/behavioral programs, including direct canvassing, K-12 education, community education, senior education, and CFL giveaway outreach events.	K-12 and community education measures are existing and are being moved into the larger Behavioral Comprehensive program
Home Energy Reports	Existing	Energy reports comparing a customer's usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive Program.	On hold. Cost-effective, but TEP is revising the Program to make it more user-friendly and more cost-effective.

PROGRAM DESCRIPTION – TABLE 5 (Support)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Energy Codes Enhancement Program	New (Proposed)	Seeks to improve the level of compliance with existing local	Request approval to count savings resulting from

		building energy codes and supports the periodic updating of these codes.	changes in appliance standards and to count 100% of the energy savings resulting from changes in EE building codes and appliance standards.
Consumer Education and Outreach	Existing	Marketing designed to increase participation in the TEP Implementation Plan and promote changes in behavior that improve energy efficiency.	No modifications, except for K-12 and community education measures being moved into Behavioral Comprehensive.
Program Development, Analysis and Reporting Software (internal support program)	Existing	New measure or program design and analysis, and developmental and maintenance of EE savings tracking software.	No modifications.

PROGRAM DESCRIPTION – TABLE 6 (Utility Improvements Sector)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Conservation Voltage Reduction	New (Proposed)	Pilot program. Seeks to reduce energy consumption in distribution systems by maximizing the VAR with computerized control.	New pilot program.
Generation Improvement and Facilities Upgrade	New (Proposed)	Seeks to reduce energy consumption in power plants and utility facilities by installing EE pumps, motors, HVAC, lighting and improvements to increase heat rate in generation.	New program.

PROGRAM DESCRIPTION – TABLE 7 (Demand Response)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
C&I Demand Response	Existing	A third party implementation contractor negotiates load reduction agreements with multiple customers to provide TEP with a guaranteed load reduction upon request.	No modifications.

RESIDENTIAL PROGRAMS

Proposed and existing measures and their cost-effectiveness are discussed in each of the sections devoted to particular programs, with ranges provided for programs with a large number of measures. Please see Appendix A-1 and Appendix A-2 for lists of individual measures and their benefit-cost ratios.

Efficient Products

Program Description. This is an existing Residential Program (currently its CFL Buy Down Program) previously approved by the Commission in Decision No. 70383 (June 13, 2010). New measures include energy efficient appliances, pool equipment and lighting.

CFLs. In communication with Staff, the Company indicated that inefficient bulbs still dominate sales and continue to occupy the majority of the shelf space at retailers in TEP's territory. TEP projects that sales of inefficient bulbs would increase to 68% from 18% if the utility's rebates program was not in place.

Program Objectives and Rationale. The Efficient Products Program promotes the purchase of energy-efficient retail products through a combination of buy-downs and possibly on-line or mail-in rebates with participating retailers. The additional measures would provide Residential customers with more opportunities to install energy-efficient measures.

Proposed Changes. In addition to the existing CFL measure, new measures are proposed for the Efficient Products Program. The proposed measures and associated incentives are listed in Appendix A-2.

Eligibility. All Residential utility customers within TEP's service territory are eligible to participate.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. Delivery will consist of a combination of buy-downs and possibly on-line or mail-in rebates with participating retailers.

Cost-effectiveness. Staff's analysis indicated that the existing CFL measure has a benefit-cost ratio of 4.82. Most of the proposed measures listed in Appendix A-2 are cost-effective with benefit-cost ratios in a range from 1.03 to 3.23. One proposed measure, the Residential Heat Pump Water Heater, is not cost-effective, with a benefit-cost ratio of 0.87.

Staff Recommendations. Staff recommends that the existing cost-effective measure (CFLs) remain in place. Staff does not recommend approval of the Residential Heat Pump Water Heater measure. With respect to the proposed cost-effective new measures, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Appliance Recycling

Program Description. TEP's proposed Appliance Recycling Program is designed to remove and recycle inefficient working refrigerators and freezers. TEP cites national studies finding that approximately 20% of customers have at least one secondary inefficient refrigerator or freezer at home. The Appliance Recycling Program would offer residential customers a \$30 incentive for working refrigerators or freezers between 10 and 30 cubic feet, plus free pick-up and recycling.

In its application, TEP originally proposed an incentive of \$50, because of non-participation in the appliance program in UNS Electric territory. The Company is now proposing a \$30 incentive, because it believes that a lower incentive might be adequate given the marketing characteristics of TEP's territory.

Program Objective and Rationale. Secondary refrigerators and freezers are usually older and less efficient models. The Appliance Recycling Program would remove such inefficient appliances and recycle them, thereby permanently removing them from the grid.

Eligibility and Processing. TEP states that:

- Participants must own the unit(s) being recycled;
- Participants must be customers of TEP;
- Units must be emptied prior to pick up;
- Units must be between 10 and 30 cubic feet in size, utilizing inside measurements;

- Pick-up must be scheduled through program partner JAC Environmental;
- All units must be in working condition;
- The refrigerator or freezer must be plugged in and operating or the crew will refuse the unit;
- Once the unit is confirmed to be in working condition and to meet all other eligibility requirements, the crews disable it so that it cannot be placed back on the grid. The unit is then loaded and sent to the recycling center for total de-manufacturing and recycling;
- Non-residential customers with working refrigerators and freezers meeting the Program size requirements would also be eligible to participate. The Program would limit customers of either class to no more than two appliances per year.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing Strategy. A third party Implementation Contractor ("IC") will verify eligibility, schedule pick-ups from customers, delivery to recycling centers and process incentives. The IC is also responsible for marketing the Program.

Cost-Effectiveness. Based on Staff's analysis, the refrigerator and freezers measures have a cost-effectiveness ratio of 2.27.

Staff Recommendations. With respect to the proposed new Appliance Recycling Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Residential New Construction

Program Description. The Residential New Construction Program is an existing program that offers incentives to homebuilders to build more energy-efficient homes (April 14, 2010, Decision No. 71638.) The Program provides training in advanced building-science concepts and promotes energy-efficient construction, as well as promoting the installation of high efficiency heating/cooling systems, lighting and appliances. It also assists sales agents in promoting and selling energy-efficient homes. The Program offers both all-electric and dual-fuel homes.

To qualify for an incentive, each home must be tested by an approved energy rater and meet criteria based on a Home Energy Rating System ("HERS").

Changes: Elimination of Tier 2 and 3 Homes. Tier 2 and 3 homes were not proposed as part of TEP's 2014 and 2015 Plan. Tier 2 and 3 were approved by Decision No. 71638 (April 14, 2013), although not found cost-effective without carbon savings and not recommended by Staff. TEP has now permanently eliminated the Tier 2 and Tier 3 measures because they are not cost-effective.

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Changes. International Energy Conservation Code ("IECC") 2012 Building Code. Five jurisdictions in Pima County¹ adopted the IECC 2012 Building Code beginning in 2013, meaning that compliant homes had to achieve a HERS score of approximately 72 or less. In response to this change in the baseline, participating Residential New Construction homes are now required to achieve a HERS score of 65 or better. A HERS score of 100 represents the energy efficiency of a standard new home.

Other Changes. No new measures were proposed for this program.

Program Objectives and Rationale. The objectives of the Residential New Construction Program include reducing the peak demand and overall energy consumption of new homes. The Program also seeks to increase homebuyer awareness of the benefits of living in energy-efficient homes.

Eligibility. Builders must be licensed, bonded and insured within Arizona. Builders must also be constructing new residential single family homes, townhomes, duplexes, or triplexes, and agree to the Energy Star participation agreement and TEP's participation requirements.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. TEP oversees management of the Program and its marketing, and is responsible for recruiting, training, and mentoring builders and sub-contractors. TEP also provides data tracking, rebate processing and technical support.

Cost-effectiveness. All-electric homes constructed in accordance with the New Construction Program's standards have a benefit-cost ratio of approximately 1.61. Dual-fuel homes constructed in accordance with New Construction Program's standards have a benefit-cost ratio of approximately 2.26.

Staff Recommendations. This program is existing and cost-effective. Staff recommends that it be approved to continue until further action of the Commission.

Existing Homes and Audit Direct Install

Program Description. The TEP Existing Homes and Audit Direct Install Program was approved by the Commission in Decision No. 72028 (December 10, 2010). The Existing Homes Program provides customer incentives for the installation of new high efficiency air conditioner, heat pump and duct system sealing. Air conditioners and heat pumps must meet efficiency standards and be installed following prescriptive quality installation standards that include the testing of charge and airflow. Pre- and post-installation testing results are used to verify energy savings. Duct system sealing also requires pre- and post-project testing to document the exact quantity of system leakage sealed.

¹ Pima County, City of Tucson, Town of Sahuarita, Town of Marana, and Town of Oro Valley. TEP also provides service in Cochise County, but its only customer is Fort Huachuca.

² Under HERS scoring, the lower the number, the more energy efficient the home.

Home Audit Component. In order to maximize cost-effectiveness the home audit component of this program was redesigned into a workshop format. Participants learn how to use an available web portal that delivers an individual home energy assessment and provides customized energy efficiency recommendations including information about other EE programs and rebates available from TEP. Finally, participants receive a direct install energy kit including six CFLs, and learn how to identify and complete simple do-it-yourself energy saving projects and behavioral changes.

Program Objectives and Rationale. The Program's objective is to achieve energy and demand savings from the installation of EE measures. The Program additionally focuses on best building and science principles in an effort to refocus the building industry on EE practices.

Changes. The original in-home audits by HVAC contractors were discontinued in 2014 due to low cost-effectiveness. TEP has redesigned the in-home audits to make them more cost-effective, as described herein.

No new measures are being proposed for the Existing Homes and Direct Audit Install Program.

Eligibility. All Residential customers in TEP's service territory are eligible to participate.

Contractors must meet the following standards in order to be deemed a "program participating contractor" and thereby eligible to offer the Program's incentives. The standards are:

- Current Arizona Contractor's license in good standing.
- Good standing with Better Business Bureau including no outstanding complaints.
- Completion of program administered training on the use of CheckMe!® diagnostic software for the analysis of pre- and post-installation HVAC air flow and charge. Licensed use of the CheckMe!® diagnostic software is provided to participating contractors at no cost through the Program; and
- Completion of program administrative processes training.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. TEP provides program management, including marketing, recruitment, training, and oversight. TEP also provides data tracking, rebate processing and technical support.

TEP markets the Program through website promotion, community interest groups, radio, newspapers, brochures, bill inserts, high bill inquiries, trade ally marketing efforts, contractor enrollment and training.

Cost-effectiveness. Most of the Existing measures passed cost-effectiveness, with benefit-cost ratios ranging from 1.00 to 2.66. (Please see Appendix A-1 for additional detail.)

Four Existing measures did not pass cost-effectiveness. These consist of two measures offering duct testing and repair with a minimum 14% reduction in leakage, and two measures offering replacement of burned out heat pump or air conditioning equipment, along with quality installation, and duct testing and repair, also resulting in a minimum 14% reduction in leakage:

- DTR_≥14% Reduction leakage (All electric);
- DTR_≥14% Reduction leakage (Dual fuel);
- HVAC_QI-DTR _≥14% Reduction leakage (All electric); and
- HVAC_QI-DTR _≥14% Reduction leakage (Dual fuel).

(No energy savings from new equipment is counted for the latter two measures.)

Staff Recommendations. Staff recommends that this existing program be approved for continuation, with the exception of those measures not passing cost-effectiveness.

Shade Trees

Program Description. The Shade Tree Program is an ongoing element of the Implementation Plan, approved in Decision No. 70455 (August 6, 2008). No modifications have been proposed for the Shade Tree Program. The Shade Tree Program promotes energy conservation and environmental benefits by motivating customers to plant desert-adapted trees in locations where the trees will provide shade and reduce HVAC load. TEP customers may purchase shade trees for \$8.00 per tree, if they agree to plant the trees on the east, west, or south sides of their homes. In addition, there are Community and Schools tree planting projects, but these must meet the planting criteria outlined for planting residential trees.

Program Objectives and Rationale. The objective of the Program is to promote the strategic planting of trees to provide shade, thereby reducing the cooling load of homes and associated energy usage, and to educate school-age children and the public on the conservation and environmental benefits of planting trees.

Proposed Changes. No modification of the Shade Tree Program was proposed. Cost-effectiveness was recalculated based on information from the APS Shade Tree Program. The Program remains cost-effective.

Eligibility. All Residential customers in TEP's service area are eligible to participate, as long as they own single-family detached homes, townhomes, and mobile homes. Small businesses, schools, and community organizations may also participate if they follow the tree type and planting requirements.

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Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. TEP partners with Trees for Tucson, a local non-profit organization that manages and administers the Program. TEP provides the incentives for trees planted using Shade Tree Program guidelines.

Due to the popularity of the Shade Tree Program, EE revenues are not normally allocated for advertising and promotion. TEP employees currently inform customers about the Shade Tree Program during speaking engagements and outreach presentations. Other efforts entail website promotion, newspaper advertising, planting and care brochure, presentations at schools, tree tours, and tree care workshops.

Cost-Effectiveness. This Existing program has a benefit-cost ratio estimated at 1.34.

Staff Recommendation. Staff recommends that the TEP Shade Tree Program be approved for continuance.

Low-Income Weatherization

Program Description. The Low-Income Weatherization ("LIW") Program is an existing program designed to enhance the energy efficiency of TEP customers in households with limited incomes (up to 150% of federal poverty guidelines).

Program Objectives and Rationale. The primary goal of the LIW Program is to fund weatherization for low-income homes, to reduce their energy costs and improve comfort and safety for low-income customers.

Proposed Changes. No modifications were originally proposed for the LIW program in the Plan. In communication with Staff, the Company is now requesting to change eligibility from 150% of Federal Poverty Level ("FPL") to 200% of FPL.

Analysis. The Department of Energy's Weatherization Assistance Program ("WAP") maintains an eligibility of 200% of FPL and utility weatherization funds are often combined with WAP funds. Increasing TEP's eligibility level to 200% of FPL would decrease the cost of program administration and increase the impact of additional DOE monies for TEP ratepayers. Updating eligibility would also allow customers who more recently experienced a drop in income, such as from a job loss, to participate in the Program.

Eligibility. Program participants must be customers of TEP. Currently, TEP bases eligibility for the LIW Program at 150% of FPL. TEP is proposing to change eligibility for the LIW Program from 150% of FPL to 200% of FPL.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. TEP's LIW Program is delivered by community action agencies approved by the Governor's Office on Energy Policy ("GOEP"). Agencies such as Pima County Community Services and the Urban League provide program administration, planning, promotion and verification of eligibility, as well as labor, materials, equipment and tracking. Funding is provided to agencies once TEP receives documentation of completed work.

Issues. There is low participation from some agencies due to the loss of American Recovery and Reinvestment Act ("ARRA") funding which has reduced budgets and staffing. GOEP is advising agencies on best practices to maximize funding. In addition, the requested change in eligibility from 150% of FPL to 200% of FPL would make it easier to use allocated funding.

In 2013 TEP saw a significant increase in the amount of funding being requested per home. TEP believes that the housing stock available for weatherization is shifting from evaporative cooling toward air conditioning. This creates greater opportunities for energy efficiency, but also means that the costs per home will continue to increase.

Cost-effectiveness. The LIW Program has a benefit-cost ratio of approximately 1.22.

Eligibility At Other Utilities. The APS weatherization program bases eligibility on 200% of FPL. UNS Gas and UNS Electric track with LIHEAP, which is currently at 150% of FPL except where 60 percent of a state's median income is higher. Southwest Gas bases eligibility at 150% of FPL.

Recommendations. Changing TEP's eligibility from 150% to 200% of FPL will allow the Company to make more efficient use of allocated funds. Staff recommends that TEP's eligibility be changed to 200% of FPL.

Multi-Family Housing Efficiency Program

Program Description. The proposed Multi-Family Housing Efficiency Program ("Multi-Family Program") would promote energy efficiency in the residential multi-family sector, to properties with five or more units to install CFLs and low-flow showerheads. Multi-family facility managers would also be encouraged to participate in the C&I Comprehensive Program for installation of energy efficiency improvements to common areas.

Program Analysis/Issues. Barriers to energy efficiency programs in the multi-family market segment include: (i) split incentives, (ii) lack of capital, and (iii) lack of information about energy efficiency improvements. These barriers are described in more detail, below.

Split Incentives. "Split incentives" describes the problem that arises in promoting energy efficiency in rental units. The builders who construct rental properties, and the owners who would be responsible for upgrades, do not usually pay the energy bills. Consequently, builders and owners do not directly benefit from the lower energy costs that arise from investing in efficiency measures, reducing or eliminating their incentive to participate in energy efficiency programs. At the same time, the renters who would benefit from lower energy bills have no direct influence over original construction and, with respect to renovations or retrofits, may not have the authority, the incentive or the means to invest in energy efficiency for housing they do not own.

Lack of Capital and Awareness. Other problems can include a lack of capital for improvements and a lack of awareness about energy efficiency. The Multi-Family Program would address both through direct installation of low cost energy efficiency improvement in existing complexes and through energy efficiency improvements to common areas.

Cost-Effectiveness. Based on Staff's analysis, the benefit-cost ratio for the three proposed direct install measures ranges from 2.23 to 3.67. (Please see Appendix A-2 for additional detail.)

Staff Recommendation. With respect to the proposed new Multi-Family Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

NON-RESIDENTIAL PROGRAMS

TEP Request Regarding Commercial Customer Eligibility. TEP has requested that the Commission approve the offering of all commercial measures to all customers participating in any commercial program. Because program costs may vary significantly from program to program, and because the usage patterns for various types of Non-residential customers also varies, a measure that is cost-effective in one program may not be cost-effective in another. Staff recommends that the Commission not approve offering all commercial measures to all customers participating in any commercial program.

C&I Comprehensive

Program Description. The Program offers incentives to Non-residential customers for installing cost-effective retrofit and replace-on-burnout ("ROB") measures in existing facilities. The C&I Comprehensive Program provides incentives to TEP's large Non-residential customers to install measures such as energy-efficient lighting equipment and controls, HVAC equipment, motors and motor drives, compressed air and leak-repair measures, and refrigeration. Originally approved in Decision No. 70403 (July 3, 2008), the Program was then named the Non-residential Existing Facilities Program.

Program Objectives and Rationale. The Program addresses high first costs and limited investment capital for retrofits and ROB's, limited awareness of the potential energy savings and requirements for short-term payback.

Proposed Changes. New measures were proposed for this program.

Eligibility. The Program is available to all existing commercial customers within TEP's service territory. Although targeted to large commercial and industrial customers, small business customers and school facilities are allowed to participate in the C&I Comprehensive Program as long as funds are available.

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Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program. Participation in this program has been greater than anticipated. The Company is requesting a budget that will allow it to accommodate participation at the current level through 2015. The requested budget is lower than the budget currently approved by the Commission.

Delivery and Marketing. The Program promotes participation either directly by large commercial customers, or through installing contractors. Marketing includes educational seminars tailored to the business market, website promotion, presentations at professional and community forums and direct outreach to customers.

Cost-effectiveness. Most of the Existing measures are cost-effective, with the exception of High Efficiency Ice Makers, Standard T8 Lighting, and Variable Speed Screw Compressors. The 18 SEER Packaged and Split AC measures approaches cost-effectiveness at 0.96 and Staff recommends that it be approved for continuance because the measure is likely to be cost-effective in practice. The remaining Existing measures are cost-effective in a range 1.00 to 6.72.

A majority of the proposed measures also pass, in a range from 1.00 to 10.85, although the Cooling Tower Subcooling, EMS-Lighting Schedule, LED channel signs and Refrigerated Display Gaskets measures failed. High Performance Glazing is a proposed measure that approaches cost-effectiveness at 0.97. (Please see Appendix A-1 for additional detail.)

Staff Recommendations. Staff recommends that cost-effective existing measures listed in Appendix A-1 remain in place, and that any non-cost-effective existing measures be terminated. Staff has also recommended that the 18 SEER Packaged and Split AC measure also remain in place, because its benefit-cost ratio is close to 1.0 and the measure is likely to be cost-effective in practice.

With respect to the proposed new measures, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Commercial New Construction

Program Description. The Commercial New Construction Program is an existing program approved in Decision No. 70459 (August 6, 2008). No modifications are planned for this program. The Program is performance based and targets owners/developers of new commercial facilities, providing incentives for commercial facilities incorporating energy-efficient construction and designs. Incentives go to both the owner and developer, and to design teams. In addition, the Program provides technical support and consumer education regarding energy efficiency options for new commercial construction.

Program Objectives and Rationale. The primary goal is to encourage more energy-efficient building designs in TEP's service area. It encourages commercial building owners and developers and the design community to consider incorporating energy efficiency as early as possible in the design process.

Eligibility. Participation is limited to owners, developers, and designers involved in constructing new commercial buildings in TEP's service territory.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program. Demand for this program has increased, and the Company anticipates that it will remain steady throughout 2014. TEP is requesting a budget comparable to its currently-approved budget.

Delivery and Marketing. The IC collects data, compares the building design to ASHRAE 90.1 Standard 2004 version and verifies energy savings and costs. There are no significant changes planned for delivery or marketing for this program.

Cost-effectiveness. The existing measures are cost-effective, with benefit-cost ratios in a range from 1.00 to 5.31, with the exception of EER-Rated Packaged AC (11.5-20 tons, 11.24 EER). The Design Assistance Incentives measure, however, has no energy savings allocated to it and Staff does not, for this reason, consider it cost-effective.

Staff Recommendations. Staff recommends that the Commercial New Construction Program remain in place, but that the EER-Rated Packaged AC (11.5-20 tons, 11.24 EER) measure and the Design Assistance Incentives measure be terminated.

Bid for Efficiency

Program Description. The Bid for Efficiency ("BFE") Pilot is a proposed program. There are no individual measures in the BFE Program. Customers or project sponsors can design their own EE projects and then bid competitively for incentives within program guidelines. BFE participants and project sponsors include commercial customers, Energy Service Companies ("ESCOs") or other aggregators who organize proposals that involve multiple sites. Results will be verified through Measurement, Evaluation, and Research activity.

Program Objectives and Rationale. The Program fosters customer-driven project activity (e.g., customers select appropriate measures and professionals to implement measures), and encourages the implementation of comprehensive, multi-measure projects. BFE encourages customers and project sponsors to think creatively and to develop projects designed to optimize system energy use as a whole, rather than considering the energy usage of each individual piece.

Proposed Changes. The Bid for Efficiency Program is proposed.

Eligibility. The Bid for Efficiency Program would be available to Non-residential customers in TEP's service territory.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. The Program is delivered through an IC[is this independent contractor?]. TEP markets the Program directly to key customers and aggregators. Particular

emphasis is paid to key market sectors such as grocery and convenience stores. TEP, and/or its IC, conducts informational meetings with potential participants and project sponsors to explain the Program rules and encourage participation.

The IC (i) collects necessary data from applications and verifies that all necessary information is provided by the customer (ii) compares individual bids and verifies analysis of energy savings and estimated cost from each bid; (iii) selects jobs based on the lowest cost per kWh reduction and notifies applicants of the award; and (iv) conducts post-installation inspection and verification of installation.

Cost-effectiveness. Based on Staff's analysis, the benefit-cost ratio for the proposed new Bid for Efficiency Program is 1.52.

Staff Recommendations. With respect to the proposed new Bid for Efficiency Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Retro-Commissioning

Program Description. The Retro-Commissioning ("RCx") Program is a proposed new program. The Program would use a systematic approach to identify building equipment and processes that are not achieving optimal efficiency in existing facilities. Eligible program applicants receive free screening energy audits. Participants also receive training to ensure proper operating and maintenance practices over time.

Program Objectives and Rationale. The RCx Program seeks to generate significant energy savings by returning existing equipment to an efficient operating condition. The Program delivers customer benefits by lowering energy bills and improving building performance and occupant comfort while reducing maintenance calls. The Program develops an RCx contractor pool, and enables TEP to build relationships with C&I customers, thus leading to other areas of participation in TEP's portfolio of EE programs. RCx programs in other utility service territories have delivered average energy savings in the range of 5-15% per facility, and measures implemented as a result of the Program's activity typically pay for themselves in less than two years.

Proposed Changes. Retro Commissioning is a proposed program.

Eligibility. Commercial customers in TEP's service territory would be eligible for this program.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. The RCx Program is marketed using traditional forms of media (e.g., print, web, newsletters, etc.), as well as targeted direct mail and outreach to engineering and trade associations. TEP and the IC also reach out directly to contractors who currently are, or could be, practicing in this area. The TEP website has been updated to include information and links for

participation. TEP account managers have been utilized to reach out to larger customers to encourage participation.

Cost-effectiveness. Based on Staff's analysis, the benefit-cost ratio for the proposed new Retro-Commissioning Program is 2.46.

Staff Recommendations. With respect to the proposed new Retro-Commissioning Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Small Business Direct Install & School Facilities

Program Description. The Small Business Direct Install ("SBDI") Program is an existing TEP Non-residential program approved in Decision No. 70457 (August 6, 2008). The Program provides incentives directly to contractors for the installation of high efficiency measures at existing small business facilities. These measures include lighting, motors, HVAC and refrigeration measures for smaller Non-residential customers.

Proposed Schools Facilities Component. Originally, the Company filed to create a separate School Facilities Program, similar the existing SBDI Program, but with a separate budget. The Company is now proposing to make School Facilities a component of SBDI. The modified Program would include a component providing incentives to contractors for providing turnkey energy efficiency installations at existing school facilities. The modified Program would utilize the same delivery method and pay incentives for the same measures offered by the existing SBDI Program. The UNS Electric Schools Program was combined with the UNSE C&I Program in Decision No. 74262. (January 6, 2014.) The modified Program would utilize the same delivery method and pay incentives for the same measures offered by the existing SBDI Program.

Program Objectives and Rationale. The primary purpose of the existing component of the Program is to promote the installation of energy efficiency measures by small commercial customers at existing facilities. The primary purpose of the proposed new Schools Facilities component is to promote the installation of energy efficiency measures by schools at their existing facilities.

Proposed Changes. TEP initially proposed the new School Facilities Program as a separate program, but is now proposing to combine it with the existing SBDI Program. The Schools Facilities component would be similar to the current SBDI Program, but would target schools rather than small commercial customers.

Issues. TEP has experienced slower-than-anticipated ramp-up since Decision No. 73910. The funding level requested by the Company will allow it to expand its efforts to increase participation by small businesses in its service territory. This funding level is less than the current approved budget for the Program. The Company states that the Program will remain cost-effective, increasing in cost-effectiveness as participation improves.

Eligibility. The existing Program is open to commercial customers within TEP's service territory who are taking service under a small commercial rate tariff. The modified program would

be open to all existing K-12 school facilities, including charter schools, within TEP's service territory.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. TEP's IC is the primary contact for small business customers. The IC handles the application and incentive processing, monitors the installation contractors, tracks and reports participation and is responsible for quality control and management of the delivery process.

Cost-effectiveness. Most of the Existing SBDI measures are cost-effective, with benefit-cost ratios ranging from 1.01 to 3.38. The following existing measures are not cost-effective: (i) Screw-in cold cathode CFLs; and Standard T8 Lighting.

Most of the proposed measures are cost-effective in a range from 1.02 to 4.12. The proposed 16 SEER Packaged and Split AC measure approaches cost-effectiveness at 0.96 and is likely to be cost-effective in practice. Advanced Power Strips—Occupancy Sensors are not cost-effective, nor is Standard T8 Lighting.

Staff Recommendations. Staff recommends that cost-effective existing measures be approved for continuance. The two non-cost-effective existing measures, as listed above, should be terminated. With respect to the proposed new measures, the two non-cost-effective measures should not be approved and Staff does not recommend approval of the cost-effective measures because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Staff recommends that schools be eligible to participate in the existing SBDI Program to the extent that the measures installed would be cost-effective. (see proposed Appendix 1-B)

CHP Program-Pilot

Program Description. The CHP Program is a proposed pilot. Combined Heat and Power ("CHP") also defined as "cogeneration", means a system that generates electricity and useful thermal energy in a single integrated system. TEP proposes this program for use by C&I customers as allowed in the Electric Energy Efficiency Rules, A.A.C. R14-2-2404(F). TEP originally planned a CHP Program in which it would work with Southwest Gas, but does not wish to be limited to working with a single gas utility.

TEP is planning two projects, described below. The Company is not paying incentives, but is seeking to recover approximately \$2,600 in Delivery costs. TEP is also seeking to count the energy savings from these projects toward the EE Standard:

- Pima County Jail: The project consists of a 100 kW generator (operates 24 hours/day) which utilizes the waste energy to heat the existing domestic hot water supply. Estimated annual kWh savings (generator output) = 750,000 kWh per year.

- University of Arizona Health Sciences Center (UAHSC): The project consists of a 5.5 MW generator (operates 24 hours/day) which utilizes the waste energy to provide steam for the UAHSC's existing steam processes. Estimated annual kWh savings (generator output) = 41 Million kWh per year.

Program Objectives and Rationale. The Company states that CHP is an affordable, clean, and reliable source of generation for meeting Arizona's energy needs and should be considered a key component to economic strategies. The market potential for CHP could contribute significantly to energy conservation in Arizona.

Program Eligibility. Customers must receive electric service from TEP to be eligible for participation. The CHP customer must comply with the Net Metering Rules and TEP's Rider R-4 efficiency minimums (42.5% efficiency or greater) to qualify.

Products and Services. TEP assists customers interested in CHP with engineering and interconnection services. Qualifying CHP customers save on utility bills by not having to utilize a Partial Requirement Service rate.

Delivery Strategy and Administration. TEP provides program delivery, administration and assists with interconnection design expertise.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. Information regarding Rider R-4 is available to customers through TEP's website www.tep.com. Local gas providers also notify customers of the advantages of CHP and suggest they contact TEP for assistance. Because each CHP project has unique characteristics, customers must contact TEP and request engineering and interconnection assistance.

Cost-effectiveness. Each project is different, and each project must be evaluated individually, but Staff estimates cost-effectiveness at 6.66.

Recommendations. With respect to the proposed new Combined Heat and Power Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures. Staff recommends, however, that TEP be allowed to count toward the Energy Efficiency Standard any savings arising from CHP projects in its service territory that conform to the requirements of the Energy Efficiency Rules.

BEHAVIORAL SECTOR

Behavioral Comprehensive

Program Description. Behavioral Comprehensive is a proposed new program. It would offer new educational/behavioral subprograms including (i) Direct Canvassing, (ii) CFL Promotion and

Outreach; and (iii) In-Home Energy Displays. In addition, the existing K-12 Education and Community Education subprograms would be moved into the Behavioral Comprehensive from the Consumer Education and Outreach Program.

Below is a table listing and describing the various components of the Behavioral Comprehensive Program.

Subprogram	Status	Description
Direct Canvassing	Proposed	Door to door awareness and direct install campaign
K-12 Education	Existing	Classroom education including take home direct install kits
Community Education	Existing	"Train the trainer" approach and direct install kits
CFL Promotion and Outreach	Proposed	CFL bulb promotion and education at outreach events
In-Home Energy Displays	Proposed	In Home Energy Displays intended to inform customers of 15 minute interval data to cause behavioral changes.

Program Objectives and Rationale. The main objective of the Program is to promote (i) habitual behaviors, such as adjusting thermostats, and turning off unnecessary lights; (ii) small purchases, such as CFLs, and encourage HVAC maintenance; and (iii) larger purchases of energy-efficient appliances.

Proposed Changes. Two pre-existing measures, K-12 Education and Community Education, will be shifted to Behavioral Comprehensive from the existing Consumer Education. TEP also proposes to add three new measures.

Eligibility. Residential customers in TEP's service territory are eligible to participate.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. Delivery of the Program is by TEP staff, except for the K-12 measure, which is delivered by the Environmental Education Exchange.

Cost-effectiveness. The existing K-12 and Community Education subprograms are cost-effective, with ratios of 2.57 and 2.16. The proposed CFL Outreach and Direct Canvassing subprograms are cost-effective, with ratios of 1.85 and 1.88. In-Home Energy Displays are not cost-effective at 0.60 and have been discontinued.

Staff Recommendations. Staff recommends that the existing subprograms, K-12 and Community Educations, remain in place until further Commission action. With respect to the proposed new Behavioral Comprehensive Program, Staff does not recommend approval of the

proposed new subprograms at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Home Energy Reports

Program Description. This Program is inactive. Home Energy Reports provided energy reports to customers regarding their energy consumption patterns in comparison to other customers. The intent of the Program was to inspire customers to decrease their energy usage based on this information. Although cost-effective for TEP, it was not cost-effective for UNS Electric, and the Program was not approved for UNS Gas customers. Because the Program cannot utilize economies of scale, as well as customer complaints, TEP decided not to renew the contract with the vendor of this program for 2014.

The Company negotiated with the vendor to maintain the web-based home energy report and savings plan tools. TEP will be issuing an RFP in an effort to find a delivery model for home energy reports that provides greater cost-effectiveness and better consumer satisfaction.

Program Objectives and Rationale. The objective of the Program was to generate savings for the TEP portfolio, to promote the Company's other EE programs, and lower energy bills for consumers.

Proposed Changes. The Company is seeking a new delivery model in order to make Home Energy Reports more cost-effective and consumer-friendly.

Eligibility. Residential customers in TEP's service territory will be eligible to participate.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. A new delivery and marketing model has yet to be established for this program.

Cost-effectiveness. Cost-effectiveness should be re-evaluated based on the new delivery model. The evaluation should include all costs associated with the Program and only those savings which can be reasonably attributed to the Home Energy Reports.

Staff Recommendations. Staff recommends that the Program remain inactive until further order of the Commission.

SUPPORT SECTOR

Consumer Education and Outreach

Program Description. The Consumer Education and Outreach ("CEO") Program is an existing program, approved by the Commission in Decision No. 70402 (July 3, 2008). The CEO Program is

intended to both increase participation in TEP's DSM/EE portfolio of programs and to effect a broader market transformation.

The CEO Program has an advertising component covering seasonal advertisements including energy saving tips, the on-line energy audit, and the marketing of other EE programs. The CEO Program also provides Time-of-Use education for Residential and Small Commercial customers, to teach them about the benefit of TOU rates and enable them to maximize savings through load shifting.

Program Objectives and Rationale. The Program consists of educational and marketing material to inform customers on how to achieve energy savings and about the benefits of conservation.

Proposed Changes. The K-12 and Community Education subprograms are being moved into the Behavioral Comprehensive Program.

Eligibility. The CEO Program targets Residential and Small Commercial customers in TEP's service territory.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. The CEO Program utilizes radio, print, bill stuffers and social media, and these are overseen by utility staff, which also oversees the development of customer questionnaires and surveys.

Cost-effectiveness. The Company notes that this educational and marketing program does not produce direct energy savings and is part of the cost-effectiveness of the portfolio as a whole. In contrast, A.A. C. R14-2-2410(F) states that "Educational programs shall be analyzed for cost-effectiveness based on estimated energy and peak demand savings resulting from increased awareness about energy use and opportunities for saving energy."

Staff Recommendations. Staff recommends that the Consumer Education and Outreach Program be retained, but that it be analyzed in accordance with A.A.C. R14-2-2410 (F) and that this information be provided in the progress reports filed in compliance with the Energy Efficiency Standards.

Energy Codes and Standards and Waivers of A.A.C. R14-2-2404 (E)

Program Description. This is a proposed TEP program. Specific program activities will depend on the needs of the local code officials. Possible activities include the following:

- Education of local code officials and building professionals on existing standards;
- Providing documentation of the specific local benefits of code enforcement, which can promote energy code changes over time;

- Ensuring utility incentive programs align with local energy codes and appliance standards;
- Collaboration with relevant stakeholders to build a more robust community, with the goal of advancing strong, effective building energy codes and appliance standards across the local jurisdictions within TEP's service territory;
- Advocating for energy code and appliance standards updates over time; and
- Participation in the legislative process to gain approval for new code adoption.

Program Objectives and Rationale. The Program will employ a variety of tactics aimed at: i) improving levels of compliance with existing building energy codes and appliance standards; and ii) supporting periodic updates to energy codes and appliance standards as warranted by market conditions.

Under R14-2-2404 (E) of the EE Rule, utilities are allowed to claim an energy savings credit for building codes. R14-2-2404 (E) states as follows:

"An affected utility may count toward meeting the standard up to one third of the energy savings, resulting from energy efficiency building codes, that are quantified and reported through a measurement and evaluation study undertaken by the affected utility."

Waivers. TEP is requesting two waivers of A.A.C. R14-2-2404 (E) in relation to the Program:

- A waiver from A.A.C. R14-2-2404 (E) to allow TEP to count energy savings resulting from EE appliance standards, as was approved for UNS Electric (Decision No. 72747, January 20, 2012) and APS (Decision No. 73089, April 5, 2012).
- A waiver from A.A.C. R14-2-2404 (E) to allow TEP to count toward meeting the EE Standard 100% of the energy savings resulting from updates in EE building codes and EE appliance standards.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Cost-effectiveness. Staff believes that additional review is necessary so that a reasonable benefit-cost ratio can be established for Code activities.

Staff Recommendations. In order to maintain the status quo with respect to EE measures and programs, Staff recommends that the Codes Program not be approved.

Should the Company opt to engage in Code activities outside a program, but in accordance with R14-2-2404 (E), Staff recommends the following:

- That TEP not receive a waiver to use 100% of building code savings. Use of 100% of building code savings is not reasonable. APS requested a similar waiver and was not granted one. (Decision No. 74406)
- That TEP be granted a waiver from R14-2-2404 (E) for up to one third of energy savings from energy efficiency appliance standards, if the energy savings are quantified and reported through a measurement and evaluation study undertaken by the Company.
- That, as with UNSE and APS, savings from changes to building and appliance codes may not be used in the energy savings calculations used to determine the amount of the Company's Performance Incentive.

UTILITY IMPROVEMENT SECTOR

Program Development, Analysis and Reporting

Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade. The Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade programs are TEP's proposed Utility Improvement programs. The Conservation Voltage Reduction Program would produce demand and energy savings through the physical adjustment of transformer settings governing voltage at the substation level. The Facilities Upgrade Program would include installation of high efficiency motors and variable speed drives, along with projects to reduce a power plant's auxiliary power or increase capacity.

In its Plan, the Company asked that all the costs associated with the Conservation Voltage Reduction Program be recovered through the DSM surcharge. With respect to the Generation Improvement and Facilities Upgrade Program, TEP also requested a waiver of A.A.C. R14-2-2404 (H) to allow TEP to count energy savings from improvements in its utility delivery system toward the Standard. TEP is requesting to recover only the administrative costs associated with preparing, reporting and validating savings.

Commission Decision Regarding APS Generation and Delivery System Improvements and Facilities Upgrades. Decision No. 74406 allowed APS to count energy savings resulting from generation and delivery system improvements and facilities upgrades toward the EE Standard. APS did not request that the costs be recovered through the APS DSM surcharge, only that the savings count toward meeting the Standard. In addition, savings from generation and delivery system improvements are not permitted to increase the Lost Fixed Cost Recovery ("LFCR"), qualify for performance incentive, or otherwise increase the performance incentive amount.

Staff Recommendations. Staff recommends that the Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade programs be approved, but that TEP not be

allowed to recover the associated costs through the DSM surcharge, thereby having no impact on the status quo with respect to new program costs. Staff believes that these proposed in-house programs to improve the Company's physical plant may benefit ratepayers, but that the costs related to them should be evaluated for recovery in a rate case. Staff also recommends that the requested waiver be approved, but that any savings not be used to increase the LFCR, qualify for performance incentive, or otherwise increase the performance incentive amount.

DEMAND RESPONSE SECTOR

C&I Direct Load Response

Program Description. The C&I Direct Load Control program is an existing program approved by the Commission in Decision No. 71787 (July 12, 2010). C&I Direct Load Control is a load curtailment program. Customers are compensated with incentives for their participation at negotiated levels.

Program Objectives and Rationale. Modifications to controls for chillers, rooftop AC units, lighting, fans, and other end-uses can reduce demand at peak times or during emergencies. In addition, the Program can provide other benefits, including i) avoided firm capacity that would otherwise be required to meet reserve requirements; ii) reduced or avoided open-market power purchases during period of high energy prices; and iii) greater grid stability and reduction in outages.

Proposed Changes. No modifications are proposed for this program.

Eligibility. This program is open to Non-residential customers in TEP's service territory with demand of at least 100 kW.

Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

Delivery and Marketing. The Program is delivered on a turn-key basis by a third-party IC who negotiates load reduction agreements with multiple customers and aggregates these customers to provide TEP with a guaranteed load reduction capacity. Because the demand response aggregator is obligated to provide the required megawatts of load curtailment, the process is similar to a power purchase agreement.

Cost-effectiveness. The benefit-cost ratio for this program is estimated by Staff at 3.40.

Staff Recommendations. The C&I Direct Load Control Program is cost-effective, and Staff recommends that the Commission approve it for continuance.

Related Filing Which May Impact the DSM Surcharge

Freeport-McMoRan Request for Exemption. On March 17, 2014, Freeport-McMoRan Copper & Gold, Inc. ("Freeport") filed an application requesting an exemption from Energy Efficiency programs and related surcharge. Freeport states that its exceptionally large consumption of electric

power makes it “more efficient for the Company [Freeport] to pursue energy efficiency on its own behalf rather than as a participant or funder of utility energy efficiency programs”²

In its application, Freeport states that it has “historically budgeted some \$10 million annually on energy-related technology.” In communication with Staff, Freeport explained that it:

“has patents and patent applications around technology that consumes less energy per pound of copper produced than the process it replaces. . . . The historic \$10 million annual budget is spent seeking ways to more efficiently produce copper in the conduct of our mining processes.”

Background. The basis for Non-residential DSM payments was altered in the most recent TEP Rate case. Non-residential customers in TEP’s service territory now pay into the DSM Surcharge based on a percentage of the bill, rather than on a per-kWh basis. Decision No. 73912, June 27, 2013, stated that:

“The DSMS rate until further Order of the Commission is \$0.002232 per kWh for residential customer and 2.5479 percent of the total bill (before RES, LFCR, assessments and taxes) for non-residential customers.”

Impact on Residential Customers. Exempting Freeport would eliminate the revenue Freeport contributes through the DSM Surcharge, but would also reduce the level of savings required for TEP to meet the EE Standard, thereby reducing the cost of meeting the EE Standard. In the case of a utility that is on a trajectory that would allow it to meet the EE Standard, the exemption of Freeport could result in lower EE costs for other ratepayers. However, TEP states that, given the current level of DSM revenues, it does not expect to meet the 2014 Standard with or without Freeport. The Company is, instead, trying to maximize savings per dollar spent based on its approved budget. In this scenario, any exemption means that ratepayers remaining in the pool of those paying into the DSM Surcharge will make up the difference. In the case of Freeport, Staff estimates, and TEP confirms, that the impact on Residential customers will be approximately 14 cents a month or \$1.68 per year.

Recent Projects and Incentives Received. In 2013 Freeport received incentives equaling more than \$2.5 million from TEP for two projects at its mine in Sierrita, in TEP’s service territory. The two projects are projected to save approximately 2.5 million kWh annually.

Although Freeport received significantly more in incentives in 2013 than it paid in through the surcharge, TEP has informed Staff that, over time, Freeport has paid in more through the surcharge than it has received in incentives.

Analysis. Cost-effective energy efficiency benefits ratepayers of all classes by postponing or avoiding new generation, and Residential and Non-residential customers are subject to the surcharge

² Freeport has mining operations in Indonesia, North America, South America and the Democratic Republic of Congo, in addition to oil and gas assets in the U.S. and the Gulf of Mexico, and has reported approximately \$63.47 billion in total assets for 2013.

which recovers TEP's costs associated with achieving this benefit. Paragraph 7.6 of the Settlement Agreement states that:

"Any customer who can demonstrate an active DSM program and whose single site usage is 25 MW or greater may file a petition with the Commission for an exemption from the DSM adjustor and, if approved, will be removed from the Energy Efficiency Standard denominator."

Freeport has demonstrated that it currently has an active DSM program at a 25 MW or greater site. Therefore, it is in keeping with Decision No. 73912 to exempt Freeport-McMoRan TEP's energy efficiency programs and surcharge. Staff also notes that Freeport is significantly motivated to work toward more efficient uses of energy in order to control or reduce its costs.

Recommendations. Staff recommends that Freeport be exempted from the DSM surcharge, until further order of the Commission, but not on a company-wide basis. As per the TEP Settlement Agreement, the single location account above 25 MW located in TEP's service territory (the Sierrita Mine) should alone be exempted. Other Freeport locations in the TEP service territory should continue to pay into the DSM surcharge.

Staff recommends, if the Freeport Sierrita location is exempted, that it no longer receive any incentives from the TEP EE portfolio of programs.

Staff recommends that the Commission require Freeport to pay into the TEP DSM bank an amount equal to what it would have paid during the period of its exemption, along with reasonable interest, should Freeport opt to return to non-exempt status regarding the TEP DSM programs and surcharge.

Staff recommends that when TEP files its next EE Implementation Plan or by October 1, 2015, whichever is sooner, TEP report what its budget and DSM surcharge would be had Freeport not been exempted.

Performance Incentive

Performance Incentive. Decision No. 73912 states that the performance incentive should be calculated at 8 percent of the net benefits capped at \$0.0125 per kWh saved, similar to the performance incentive approved for APS in Docket No. E-01345A-12-0224.

Decision No. 73912, from the most recent rate case, ordered that:

"[T]he performance incentive, tied to the cost effective energy savings, shall be reviewed, established and approved as appropriate as part of the Commission's Energy Efficiency Implementation Plan and DSM Surcharge reset proceedings for Tucson Electric Power Company."

On March 2, 2014, TEP calculated a Performance Incentive of \$1,959,391 for 2013 as part of its annual DSM progress report. On April 10, 2014, TEP filed an updated calculation, based on

lower kWh savings, resulting in the Performance Incentive being revised downward to \$1,879,095. Review of this filing indicates that the Performance Incentive was calculated in accordance with Decision No. 73912.

TEP is currently projecting a Performance Incentive of approximately \$1 million for 2014. This number may be revised based on actual net benefits and kWh savings for 2014.

DSM Surcharge Reset

Background and Current DSM Surcharge. The purpose of the DSM Surcharge is to recover the costs associated with the Company's energy efficiency programs, including the Performance Incentive. In the most recent rate case, the Residential DSM Surcharge was set at \$0.002232 per kWh and the Non-residential DSM Surcharge was set at 2.5479% of total bill (before RES, LFCR, assessments and taxes). Staff believes that the DSM Surcharge should be reset to reflect the requested budget, the significantly decreased under-collection, and the potential Freeport exemption.

Below are comparisons of the current DSM Surcharge with (i) the updated DSM Surcharge, with participation by Freeport; and (ii) without participation by Freeport.

Current DSM Surcharge	
Residential	\$0.002232 per kWh
Non-residential	2.5479% of total bill (before RES, LFCR, assessments and taxes)
Reset of DSM Surcharge with participation by Freeport	
Residential	\$0.002149 per kWh
Non-residential	2.399% of total bill (before RES, LFCR, assessments and taxes)
Reset of DSM Surcharge without participation by Freeport	
Residential	\$0.002311 per kWh
Non-residential	2.466% of total bill (before RES, LFCR, assessments and taxes)

Below is a table showing estimated Residential bill impacts, based on average kWh use, of the current DMS Surcharge, and the DMS Surcharges with and without participation by Freeport:

Residential Usage	kWh/month	Current per-kWh	Monthly Bill Impact	Reset + Freeport	Monthly Impact + Freeport	Reset - Freeport	Monthly Impact - Freeport
Monthly Average	865.25	0.002232	\$1.93	0.002149	\$1.86	0.002311	\$2.00

Recommendations Regarding Reset. Staff recommends that the DSM Surcharge be reset to \$0.002149 per kWh (Residential)/2.399% of total bill, before RES, LFCR, assessments and taxes (Non-residential) if the Commission decides not to approve Freeport's requested exemption from the DSM Surcharge. If the Commission decides to approve Freeport's requested exemption from the DSM Surcharge, Staff recommends that the DSM Surcharge be reset to \$0.002311 per kWh (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).

Requested Waiver

In accordance with A.A.C. R14-2-2404 (B), TEP has requested a waiver of the EE Standard. TEP believes that, based on the current status of its EE Plan, and on other economic factors, it will not be able to meet the EE Standard for 2014 as set forth in A.A.C. R14-2-2404 (B). TEP states that, notwithstanding its request for a waiver, it will continue to work toward the maximum cost-effective savings per dollar spent.

Staff recommends that TEP be granted a waiver of the Energy Efficiency Standard ("EE Standard") until further Commission action.

Summary of Staff Recommendations

Staff makes the following recommendations:

Waivers

- that the Energy Efficiency Standard set forth in A.A.C. R14-2-2404(B) be waived for Tucson Electric Power Company until further action of the Commission.
- that A.A.C. R14-2-2404(H) be waived for Tucson Electric Power Company, to the extent that Tucson Electric Power Company may count cost-effective energy savings from improvements to its facilities and generation systems toward compliance with the Energy Efficiency Standard.
- that A.A.C. R14-2-2404(E) be waived for Tucson Electric Power Company, to the extent that Tucson Electric Power Company may count up to one third of energy efficiency savings from energy efficiency appliance codes toward the Energy Efficiency Standard.
- that A.A.C. R14-2-2404(E) not be waived for Tucson Electric Power Company to the extent that Tucson Electric Power Company may not count more than one third of energy efficiency savings from energy efficiency building or appliance codes toward the Energy Efficiency Standard.

Ongoing Cost-Effectiveness

- that if Tucson Electric Power Company finds any Commission-approved program or measure no longer cost-effective, Tucson Electric Power Company should file, in this docket, a letter stating that the program or measure will be discontinued.

Budget

- that Tucson Electric Power Company maintain its budget at the \$18,839,760 requested herein.

Flexibility

- that Tucson Electric Power Company has the flexibility to move funding between cost-effective programs and measures, with the exception of the low-income weatherization program, and is divided as evenly as is reasonably possible between Residential and Non-residential customers.

Freeport McMoRan Request for Exemption

- that Freeport be exempted from the DSM surcharge, but not on a company-wide basis. As per the Tucson Electric Power Company Settlement Agreement, the single location account above 25MW located in Tucson Electric Power Company's service territory (the Sierrita Mine) should alone be exempted. Other Freeport locations in the Tucson Electric Power Company service territory should continue to pay into the DSM surcharge.
- that the Freeport Sierrita mine no longer receives any incentives from the Tucson Electric Power Company EE portfolio of programs.
- that Freeport be required to pay into the Tucson Electric Power Company DSM bank an amount equal to what it would have paid during the period of its exemption, along with reasonable interest, should Freeport opt to return to non-exempt status regarding the Tucson Electric Power Company DSM programs and surcharge.
- that the DSM Surcharge be reset to \$0.002311 per kWh (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).
- that Freeport's exemption be limited in that it must continue to report energy efficiency activities and savings on an annual basis, as verified by an independent third party, to TEP.
- that Freeport's energy savings be reported by TEP in its Progress Report filed in March of each year.

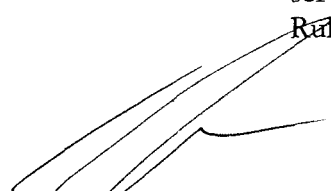
Request for Commercial Cross-Program Eligibility

- that Tucson Electric Company's request that it be allowed to offer all commercial measures to all customers participating in any commercial program be denied.

Programs and Measures

- that none of the measures listed under "Discontinued Measures" be approved as part of Tucson Electric Power Company's EE portfolio.
- that the Efficient Products Program remain in effect with the existing cost-effective measure (CFLs) in place, but the proposed new measures not be approved at this time
- that the proposed new Appliance Recycling Program not be approved at this time.
- that the existing Residential New Construction Program remain in effect until further Commission order.
- that the existing Existing Homes Program remain in effect until further Commission order.
- that the existing Shade Tree Program remain in effect until further order of the Commission.
- that the existing Low-Income Weatherization Program remain in effect until further order of the Commission.
- that eligibility for participating in the Low-Income Weatherization Program be changed from 150% of the Federal Poverty Level to 200% of the Federal Poverty Level.
- that the proposed new Multi-Family Housing Efficiency Program not be approved at this time.
- that the Consumer Education and Outreach Program remain in effect, but that it be analyzed in accordance with A.A.C. R14-2-2410(F) and that this information be provided in the progress reports filed in compliance with the Energy Efficiency Rules.
- that the Energy Codes and Standards Program not be approved at this time.

- that the Conservation Voltage Reduction Program be approved, but that there be no recovery for this program through the DSM Surcharge.
- that the Generation Improvement and Facilities Upgrade Program be approved, but that there be no recovery for this program through the DSM Surcharge.
- that the C&I Direct Load Control Program remain in effect until further Commission action.
- that the C&I Comprehensive Program remain in effect until further Commission order. Cost-effective existing measures listed in Appendix 1-A, including the 18 SEER Packed and Split AC measure, shall continue, while any non-cost-effective existing measures should be discontinued. No new measures are approved for the C&I Comprehensive Program at this time.
- that the Bid for Efficiency Program not be approved at this time.
- that the Retro-Commissioning Program not be approved at this time.
- that the Small Business Direct Install Program remain in effect until further Commission order and that schools be eligible to participate in the Program to the extent that such participation would be cost-effective. (see Appendix 1-A)
- that the Combined Heat and Power Program not be approved at this time.
- that Tucson Electric Power Company be allowed to count toward the Energy Efficiency Standard any savings arising from CHP projects in its service territory that conform to the requirements of the Energy Efficiency Rules.


Steven M. Olea
Director
Utilities Division

SMO:jmk:sms\RRM

ORIGINATOR: Julie Mcneely-Kirwan

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 BOB STUMP

Chairman

3 GARY PIERCE

Commissioner

4 BRENDA BURNS

Commissioner

5 BOB BURNS

Commissioner

6 SUSAN BITTER SMITH

Commissioner

7

8 IN THE MATTER OF THE APPLICATION
9 OF TUCSON ELECTRIC POWER
10 COMPANY FOR APPROVAL OF ITS 2014
11 AND 2015 ENERGY EFFICIENCY
12 IMPLEMENTATION PLAN AND FOR
13 WAIVER UNDER A.A.C. R14-2-2419.

DOCKET NO. E-01933A-13-0183

DECISION NO. _____

ORDER

12

13

Open Meeting
October 16, 2014
Phoenix, Arizona

14

15

16 BY THE COMMISSION:

17

FINDINGS OF FACT

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1. Tucson Electric Power Company ("TEP" or "the Company") is engaged in providing electric power within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.

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Background

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2. On July 3, 2013, TEP filed an application for approval of its 2014 Energy Efficiency Implementation Plan ("Plan") and for a waiver of the Energy Efficiency ("EE") Standard under A.A.C. R14-2-2419. The Plan proposes new measures and programs and the discontinuance of some measures, discussed further herein. The Plan also includes a notification that the Residential and Small Commercial Demand Response Program would be removed from TEP's portfolio following the pilot program. In addition, the Plan proposes to make other modifications, such as moving or revising program components.

1 3. 2015 Plan. On June 2, 2014, TEP filed a notice in this Docket that the 2014 Energy
2 Efficiency Plan filed on June 3, 2013, "should also be considered the 2015 Implementation Plan." No
3 changes to the budget or programs were proposed. The notice also included information regarding
4 the impact on compliance with the EE Standard of the exemption requested by Freeport McMoRan.

5 4. Freeport McMoRan Exemption. On March 17, 2014, Freeport-McMoRan Copper & Gold,
6 Inc. ("Freeport") filed an application requesting exemption from TEP's Demand-side Management
7 Surcharge. The impact of the requested exemption on TEP compliance and on customer bills is
8 discussed further herein.

9 5. Demand-side Management ("DSM") Surcharge Reset. TEP noted that it is not requesting a
10 reset of the existing DSM Surcharge as a part of this Plan. Although a reset is not required at this
11 time, Staff believes that the DSM Surcharge should be reset to reflect the requested budget, the
12 significantly decreased under-collection, and the potential Freeport exemption. The DSM Surcharge
13 reset is discussed further herein.

14 6. Rate Case Decision Regarding Status Quo. In the most recent TEP rate case (Decision No.
15 73912, June 27, 2013), the Commission ordered that the Company maintain the status quo with
16 respect to its EE programs. The Decision stated the following:

17
18 "Regardless of the mechanism for recovering approved EE/DSM Program costs, we
19 find that only the proposed EE/DSM Programs and budgets adopted in the
20 Settlement Agreement, and which have already been approved by the Commission in
21 previous decisions, should be approved."

22 7. Rate Case Decision Regarding Budget. Decision No. 73912 also approved a budget of \$21
23 million. This budget was based on the one proposed in Exhibit TEP-11 from the rate case, but
24 modified to reflect the Decision's order (cited above) to maintain the status quo with respect to
25 programs.

25 Appendices

26 8. Existing and proposed programs will be discussed herein. Three Appendices are attached
27 that provide data on the individual measures.

28 ...

- Appendix 1-A, Cost-effectiveness. Appendix 1-A lists the existing programs and measures alphabetically, along with the updated Staff benefit-cost ratio, and the total incentive amount associated with that measure. (Cost-effectiveness was recalculated for all measures)
- Appendix 1-B, Cost-effectiveness. Appendix 1-B lists the proposed programs and measures alphabetically, along with the Staff benefit-cost ratio, and the total incentive amount associated with that measure.
- Appendix 2, Measure Detail Description. Appendix 2 lists the existing and proposed programs, the associated measures (also alphabetically) and provides a description of the individual measures.
- Appendix 3, Approving Decisions and Benefit-Cost Ratios, Existing Measures. Appendix 3 lists the Decisions in which existing measures were approved, along with the benefit-cost ratios from those Decisions.

Programs Discontinued or No Longer Proposed

9. Residential Financing. TEP is no longer proposing a Residential Financing Program. To be cost-effective, the Program would have to be offered in all of UniSource's territories. Since the Program was discontinued by UNS Electric (Decision No. 74599, July 30, 2014), and not approved for UNS Gas (Decision No. 73939, June 27, 2013), TEP chose to remove it from its 2014 list of programs.

10. Residential and Small Commercial Demand Control pilots. The Residential Demand Control Pilot Program was discontinued, as was the Small Commercial Demand Control pilot, although commercial customers with 100 kW or more of demand are eligible to participate in the Commercial Demand Control Program. (100 kW or more of demand is required in order to be cost-effective.)

TEP states in its application that it:

"has decided not to offer a mass market Direct Load Control ("DLC") program and is not requesting any budget approval in this EE Plan. TEP does not need this technology at this time to ensure safe and reliable service, and its contribution to the EE Standard is better met through TEP's Commercial & Industrial ("C&I") DLC program."

...

11. Home Energy Reports. In addition, the Home Energy Reports Pilot Program was put on hold. TEP states in its progress report for 2013 that although cost-effective for TEP, it was not cost-effective, or approved, for UNS Electric. TEP notes that the Program could not utilize economies of scale and that customers complained that the reports were being delivered on an unsolicited, or opt-out, basis. Customers also questioned the accuracy of the reports. TEP proposes to maintain funding because it is planning to find another delivery model that will provide higher savings and better consumer satisfaction.

12. Discontinued Measures. Additionally, in its Plan, and following an update of avoided costs, TEP found a small number of proposed and existing measures to be non-cost-effective and is no longer offering them. Staff has also recommended that these measures not be included in the Company's EE portfolio. These include the following:

- Behavioral Comprehensive Program—In Home Display Pilot (Proposed)
- C&I Comprehensive—LED Pedestrian Signals (Proposed)
- C&I Comprehensive—LED Street Parking Lights (Existing)
- C&I Comprehensive—Bi-Level Lighting (Proposed)
- C&I Comprehensive—Night Covers (Existing)
- C&I Comprehensive—T8 to T8 (Existing)
- Small Business Direct Install and C&I Comprehensive—Night Covers (Existing)
- Small Business Direct Install and C&I Comprehensive—T8 to T8 (Existing)

13. TEP has withdrawn its request (shown in Table 3.3 of the Plan) to suspend the following measures. TEP now considers these measures cost effective. (The below measures were broken out into six related measures. Those offering at least 50% reduction in leakage passed Staff's cost-effectiveness review, while those offering at least 14% did not achieve a benefit-cost ratio of 1.0.)

- Existing Homes and Audit Direct Install--ROB_HVAC with QI and Duct Sealing_Electric (Performance)
- Existing Homes and Audit Direct Install--ROB_HVAC with QI and Duct Sealing_Dual Fuel (Performance)

...

Proposed Budget

14. The budget proposed by TEP is shown below. It has been revised since the June 3, 2013 filing to reflect removal of the Residential Financing program, actual program activity levels, and the proposed combination of the previously separate Small Business Direct Install and School Facilities into a single program. (School Facilities was originally proposed as a separate program.) At \$18.8 million it is below the budget level set within the rate case.

TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET

Program	Status	Incentive	Delivery	Marketing	Administration	Measurement	Total
Residential Sector		\$5,676,726	\$1,259,950	\$458,525	\$224,313	\$217,735	\$7,837,249
Efficient Products	Existing	\$1,832,659	\$415,813	\$143,390	\$90,303	\$65,754	\$2,547,919
Appliance Recycling	Proposed	\$90,000	\$174,535	\$143,293	\$26,215	\$29,846	\$463,889
Residential New Construction	Existing	\$1,050,000	\$57,000	\$75,000	\$61,575	\$52,628	\$1,296,203
Existing Homes	Existing	\$2,300,000	\$594,527	\$68,451	\$23,971	\$47,003	\$3,033,952
Shade Trees	Existing	\$150,500	\$0	\$4,919	\$6,849	\$2,364	\$164,632
Low-income Weatherization	Existing	\$232,800	\$6,500	\$15,591	\$11,678	\$16,526	\$283,095
Multi-family	Proposed	\$20,767	\$11,575	\$7,881	\$3,722	\$3,614	\$47,559
Commercial Sector		\$3,550,674	\$2,031,018	\$505,361	\$332,014	\$216,787	\$6,635,854
C&I Comprehensive	Existing	\$1,856,108	\$860,523	\$203,428	\$160,141	\$93,286	\$3,173,486
Commercial New Construction	Existing	\$217,200	\$82,443	\$34,220	\$15,509	\$11,293	\$360,665
Bid for Efficiency Pilot	Proposed	\$60,000	\$74,052	\$15,502	\$8,901	\$7,503	\$165,958
Retro-commissioning	Proposed	\$88,000	\$27,500	\$6,423	\$5,633	\$5,935	\$133,491
Small Business Direct Install & School Facilities	SBDI Existing//S F Proposed	\$1,329,366	\$984,000	\$245,788	\$141,742	\$98,770	\$2,799,666
CHP Program	Proposed	\$0	\$2,500	\$0	\$88	\$0	\$2,588
Behavioral Sector		\$235,800	\$428,318	\$75,000	\$42,531	\$84,934	\$866,583
Behavioral Comprehensive	Proposed, with existing components	\$235,800	\$196,000	\$75,000	\$30,042	\$32,033	\$568,875

1	Home Energy Reports	Existing	\$0	\$232,318	\$0	\$12,489	\$52,901	\$297,708
2	Support Sector		\$0	\$977,886	\$485,000	\$36,209	\$52,901	\$1,551,996
3	Consumer Education and Outreach	Existing	\$0	\$98,000	\$485,000	\$23,720	\$0	\$606,720
4	Energy Codes and Standards	Proposed	\$0	\$104,886	\$0	\$12,489	\$52,901	\$170,276
5	Program Development, Analysis and Reporting	Existing	\$0	\$775,000	\$0	\$0	\$0	\$775,000
6	Utility Improvement Sector		\$0	\$388,482	\$0	\$16,850	\$22,768	\$428,100
7	Conservation Voltage Reduction	Proposed	\$0	\$363,482	\$0	\$15,746	\$20,168	\$399,396
8	Generation Improvement and Facilities Upgrade	Proposed	\$0	\$25,000	\$0	\$1,104	\$2,600	\$28,704
9	Demand Response Sector		\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
10	C&I Direct Load Control	Existing	\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
11	Total		\$9,463,200	\$6,505,654	\$1,523,886	\$711,896	\$635,125	\$18,839,760
12	Total Percentage of Budget		50.2%	34.5%	8.1%	3.8%	3.4%	100.0%

Overall Recommendations

15. During the June 11, 2013 Open Meeting, the Commission directed that a generic Docket (Docket No. E-00000XX-13-0214) be opened to address DSM and EE. The Commission indicated a desire to review the effectiveness of existing DSM and energy efficiency programs and measures before approving new ones and only approved recently-filed DSM/EE Plans for certain utilities as they related to the plans' "status quo" (i.e. new programs and/or modifications and/or enhancements to existing programs were not approved). It is reasonable to maintain the status quo for the TEP 2014 and 2015 Energy Efficiency Plan, with the exception that measures which are no longer cost-effective should be removed from the portfolio and that the overall budget can be adjusted to reflect these removals.

16. Staff has recommended that TEP maintain its budget at the requested \$18.8 million. Staff has recommended that TEP have the flexibility to move funding between cost-effective

1 programs and measures, with the exception of the Low-income Weatherization Program, as long as
2 funding is restricted to cost-effective programs and measures and is divided as evenly as reasonably
3 possible between Residential and Non-residential customers.

4 Programs

5 17. The portfolio summary, below, lists and describes all the Programs, and describes
6 proposed changes to existing programs.

7 PROGRAM DESCRIPTION – TABLE 2 (Residential)
8

9 RESIDENTIAL 10 SECTOR			
11 Program Name	Existing or proposed	Summary Description	Summary of Proposed Changes
12 Appliance Recycling	New (Proposed)	Removes and recycles inefficient refrigerators and freezers.	New program.
14 Multi-Family	New (Proposed)	Promotes direct install of energy efficient measures at apartment complexes consisting of five or more units.	New program.
18 Efficient Products	Existing	Program currently promotes CFLs. The Company has proposed including Residential LEDs, advanced power strips, and energy efficient pool pumps and timers and energy- efficient appliances.	Request to add new measures.
25 Low Income Weatherization	Existing	Assists in making low-income homes more energy efficient.	Increase for eligibility to 200% of Federal Poverty Level ("FPL").
27 Residential New Construction	Existing	Promotes the building of more efficient new	Notification that baseline EE standards/costs

		homes.	updated to reflect 2012 IECC. Tier 2 and 3 Homes eliminated.
Existing Homes and Audit Direct Install	Existing	Promotes energy efficiency in existing homes.	Notification that Audits and HVAC improvement delivery have been redesigned to make them more cost-effective.
Shade Tree	Existing	Promotes planting of desert-adapted shade trees in locations designed to enhance energy efficiency.	Notification that savings and incremental cost have been updated. No other modifications.

PROGRAM DESCRIPTION – TABLE 3 (Commercial)

COMMERCIAL SECTOR			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Bid for Efficiency – Pilot	New (Proposed)	Customers or project sponsors develop a holistic EE project then bid competitively for incentives within broad program guidelines.	New program.
Retro-Commissioning	New (Proposed)	Promotes using a systematic approach in existing buildings to identify building equipment or processes that are not achieving optimal performance or results in an existing facility.	New program.
CHP Program – Pilot	New (Proposed)	Promotes combined heat and power plants in existing facilities to reduce	New program.

		electric consumption.	
Small Business Direct Install and Schools Facilities	Existing/New (Proposed)	Promotes installation of EE equipment at commercial customer's facilities and at schools by reducing out-of-pocket costs. Encourages customers to promote the Program by paying contractors the incentives.	Request to add new measures.
C&I Comprehensive	Existing	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to provide turn-key installation services to business customers.	Request to add new measures.
Commercial New Construction	Existing	A re-branding of the Efficient Commercial Building Design Program intended to assist customers in designing and constructing energy efficient buildings.	No modifications.

PROGRAM DESCRIPTION – TABLE 4 (Behavioral)

Behavioral Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Behavioral Comprehensive	K-12 and community education measures are existing. Other components are	A variety of educational/behavioral programs, including direct canvassing, K-12 education, community education,	K-12 and community education measures are existing and are being moved into the larger

	proposed (new).	senior education, and CFL giveaway outreach events.	Behavioral Comprehensive program
Home Energy Reports	Existing	Energy reports comparing a customer's usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive Program.	On hold. Cost-effective, but TEP is revising the Program to make it more user-friendly and more cost-effective.

PROGRAM DESCRIPTION – TABLE 5 (Support)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Energy Codes Enhancement Program	New (Proposed)	Seeks to improve the level of compliance with existing local building energy codes and supports the periodic updating of these codes.	Request approval to count savings resulting from changes in appliance standards and to count 100% of the energy savings resulting from changes in EE building codes and appliance standards.
Consumer Education and Outreach	Existing	Marketing designed to increase participation in the TEP Implementation Plan and promote changes in behavior that improve energy efficiency.	No modifications, except for K-12 and community education measures being moved into Behavioral Comprehensive.
Program Development, Analysis and Reporting Software	Existing	New measure or program design and analysis, and developmental and maintenance of EE savings tracking software.	No modifications.

PROGRAM DESCRIPTION – TABLE 6 (Utility Improvements Sector)

Support Sector			
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Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Conservation Voltage Reduction	New (Proposed)	Pilot program. Seeks to reduce energy consumption in distribution systems by maximizing the VAR with computerized control.	New pilot program.
Generation Improvement and Facilities Upgrade	New (Proposed)	Seeks to reduce energy consumption in power plants and utility facilities by installing EE pumps, motors, HVAC, lighting and improvements to increase heat rate in generation.	New program.

PROGRAM DESCRIPTION – TABLE 7 (Demand Response)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
C&I Demand Response	Existing	A third party implementation contractor negotiates load reduction agreements with multiple customers to provide TEP with a guaranteed load reduction upon request.	No modifications.

RESIDENTIAL PROGRAMS

18. Proposed and existing measures and their cost-effectiveness are discussed in each of the sections devoted to particular programs, with ranges provided for programs with a large number of measures. Please see Appendix A-1 and Appendix A-2 for lists of individual measures and their benefit-cost ratios.

1 **Efficient Products**

2 19. Program Description. This is an existing Residential Program (currently its CFL
3 Buy Down Program) previously approved by the Commission in Decision No. 70383 (June 13, 2010).
4 New measures, include energy efficient appliances, pool equipment and lighting.

5 20. CFLs. In communication with Staff, the Company indicated that inefficient bulbs still
6 dominate sales and continue to occupy the majority of the shelf space at retailers in TEP's territory.
7 TEP projects that sales of inefficient bulbs would increase to 68% from 18% if the utility's rebates
8 program was not in place.

9 21. Program Objectives and Rationale. The Efficient Products Program promotes the purchase of
10 energy-efficient retail products through a combination of buy-downs and possibly on-line or mail-in
11 rebates with participating retailers. The additional measures would provide Residential customers with
12 more opportunities to install energy-efficient measures.

13 ...

14 22. Proposed Changes. In addition to the existing CFL measure, new measures are proposed for
15 the Efficient Products Program. The proposed measures and associated incentives are listed in
16 Appendix A-2.

17 23. Eligibility. All Residential utility customers within TEP's service territory are eligible to
18 participate.

19 24. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
20 the sector, projected costs per category, and total budget for each program.

21 25. Delivery and Marketing. Delivery will consist of a combination of buy-downs and possibly
22 on-line or mail-in rebates with participating retailers.

23 26. Cost-effectiveness. Staff's analysis indicated that the existing CFL measure has a benefit-cost
24 ratio of 4.82. Most of the proposed measures listed in Appendix A-2 are cost-effective with benefit-
25 cost ratios in a range from 1.03 to 3.23. One proposed measure, the Residential Heat Pump Water
26 Heater, is not cost-effective, with a benefit-cost ratio of 0.87.

27 27. Staff Recommendations. Staff has recommended that the existing cost-effective measure
28 (CFLs) remain in place. Staff does not recommend approval of the Residential Heat Pump Water

1 Heater measure. With respect to the proposed cost-effective new measures, Staff does not
2 recommend approval at this time because of the Commission's desire to preserve the status quo while
3 it evaluates the effectiveness of existing programs and measures.

4 Appliance Recycling

5 28. Program Description. TEP's proposed Appliance Recycling Program is designed to remove
6 and recycle inefficient working refrigerators and freezers. TEP cites national studies finding that
7 approximately 20% of customers have at least one secondary inefficient refrigerator or freezer at
8 home. The Appliance Recycling Program would offer residential customers a \$30 incentive for
9 working refrigerators or freezers between 10 and 30 cubic feet, plus free pick-up and recycling.

10 29. In its application, TEP originally proposed an incentive of \$50, because of non-
11 participation in the appliance program in UNS Electric territory. The Company is now proposing a
12 \$30 incentive, because it believes that a lower incentive might be adequate given the marketing
13 characteristics of TEP's territory.

14 30. Program Objective and Rationale. Second refrigerators and freezers are usually older and less
15 efficient models. The Appliance Recycling Program would remove such inefficient appliances and
16 recycle them, thereby permanently removing them from the grid.

17 31. Eligibility and Processing. TEP states that:

- 18 • Participants must own the unit(s) being recycled;
- 19 • Participants must be customers of TEP;
- 20 • Units must be emptied prior to pick up;
- 21 • Units must be between 10 and 30 cubic feet in size, utilizing inside measurements;
- 22 • Pick-up must be scheduled through program partner JAC Environmental;
- 23 • All units must be in working condition;
- 24 • The refrigerator or freezer must be plugged in and operating or the crew will refuse
25 the unit;
- 26 • Once the unit is confirmed to be in working condition and to meet all other
27 eligibility requirements, the crews disable it so that it cannot be placed back on the
28

1 grid. The unit is then loaded and sent to the recycling center for total de-
2 manufacturing and recycling.

- 3 • Non-residential customers with working refrigerators and freezers meeting the
4 Program size requirements would also be eligible to participate. The Program
5 would limit customers of either class to no more than two appliances per year.

6 32. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
7 the sector, projected costs per category, and total budget for each program.

8 33. Delivery and Marketing Strategy. A third party Implementation Contractor ("IC") will verify
9 eligibility, schedule pick-ups from customers, delivery to recycling centers and process incentives. The
10 IC is also responsible for marketing the Program.

11 34. Cost-Effectiveness. Based on Staff's analysis, the refrigerator and freezers measures have a
12 cost-effectiveness ratio of 2.27.

13 35. Staff Recommendations. With respect to the proposed new Appliance Recycling Program,
14 Staff does not recommend approval at this time because of the Commission's desire to preserve the
15 status quo while it evaluates the effectiveness of existing programs and measures.

16 Residential New Construction

17 36. Program Description. The Residential New Construction Program is an existing program
18 that offers incentives to homebuilders to build more energy-efficient homes (April 14, 2010, Decision
19 No. 71638.) The Program provides training in advanced building-science concepts and promotes
20 energy-efficient construction, as well as promoting the installation of high efficiency heating/cooling
21 systems, lighting and appliances. It also assists sales agents in promoting and selling energy-efficient
22 homes. The Program offers both all-electric and dual-fuel homes.

23 37. To qualify for an incentive, each home must be tested by an approved energy rater and
24 meet criteria based on a Home Energy Rating System ("HERS").

25 38. Changes: Elimination of Tier 2 and 3 Homes. Tier 2 and 3 homes were not proposed as part
26 of TEP's 2014 and 2015 Plan. Tier 2 and 3 were approved by Decision No. 71638 (April 14, 2013),
27 although not found cost-effective without carbon savings and not recommended by Staff. TEP has

28 ...

1 now permanently eliminated the Tier 2 and Tier 3 measures because they are no longer cost-effective
2 or because Commission Staff has recommended against their approval.

3 39. Changes. International Energy Conservation Code ("IECC") 2012 Building Code. Five
4 jurisdictions in Pima County¹ adopted the IECC 2012 Building Code beginning in 2013, meaning that
5 compliant homes had to achieve a HERS score of approximately 72 or less. (Under HERS scoring,
6 the lower the number, the more energy efficient the home.) In response to this change in the baseline,
7 participating Residential New Construction homes are now required to achieve a HERS score of 65 or
8 better. A HERS score of 100 represents the energy efficiency of a standard new home.

9 40. Other Changes. No new measures were proposed for this program.

10 41. Program Objectives and Rationale. The objectives of the Residential New Construction
11 Program include reducing the peak demand and overall energy consumption of new homes. The
12 Program also seeks to increase homebuyer awareness of the benefits of living in energy-efficient
13 homes.

14 42. Eligibility. Builders must be licensed, bonded and insured within Arizona. Builders must
15 also be constructing new residential single family homes, townhomes, duplexes, or triplexes, and agree
16 to the Energy Star participation agreement and TEP's participation requirements.

17 43. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
18 the sector, projected costs per category, and total budget for each program.

19 44. Delivery and Marketing. TEP oversees management of the Program and its marketing, and
20 is responsible for recruiting, training, and mentoring builders and sub-contractors. TEP also provides
21 data tracking, rebate processing and technical support.

22 45. Cost-effectiveness. All-electric homes constructed in accordance with the New Construction
23 Program's standards have a benefit-cost ratio of approximately 1.61. Dual-fuel homes constructed in
24 accordance with New Construction Program's standards have a benefit-cost ratio of approximately
25 2.26.

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28 ¹ Pima County, City of Tucson, Town of Sahuarita, Town of Marana, and Town of Oro Valley. TEP also provides
service in Cochise County, but its only customer is Fort Huachuca.

1 46. Staff Recommendations. This program is existing and cost-effective. Staff has recommended
2 that it be approved to continue until further action of the Commission.

3 Existing Homes and Audit Direct Install

4 47. Program Description. The TEP Existing Homes and Audit Direct Install Program was
5 approved by the Commission in Decision No. 72028 (December 10, 2010). The Existing Homes
6 Program provides customer incentives for the installation of new high efficiency air conditioner, heat
7 pump and duct system sealing. Air conditioners and heat pumps must meet efficiency standards and
8 be installed following prescriptive quality installation standards that include the testing of charge and
9 airflow. Pre- and post-installation testing results are used to verify project energy savings. Duct
10 system sealing also requires pre- and post-project testing to document the exact quantity of system
11 leakage sealed.

12 48. Home Audit Component. In order to maximize cost-effectiveness the home audit
13 component of this program was redesigned into a workshop format. Participants learn how to use an
14 available web portal that delivers an individual home energy assessment and provides customized
15 energy efficiency recommendations including information about other EE programs and rebates
16 available from TEP. Finally, participants receive a direct install energy kit including six CFLs, and
17 learn how to identify and complete simple do-it-yourself energy saving projects and behavioral
18 changes.

19 49. Program Objectives and Rationale. The Program's objective is to achieve energy and demand
20 savings from the installation of EE measures. The Program additionally focuses on best building and
21 science principles in an effort to refocus the building industry on EE practices.

22 50. Changes. The original in-home audits by HVAC contractors were discontinued in 2014
23 due to low cost-effectiveness. TEP has redesigned the in-home audits to make them more cost-
24 effective, as described herein.

25 51. No new measures are being proposed for the Existing Homes and Direct Audit Install
26 Program.

27 52. Eligibility. All Residential customers in TEP's service territory are eligible to participate.

28 ...

53. Contractors must meet the following standards in order to be deemed a “program participating contractor” and thereby eligible to offer the Program’s incentives. The standards are:

- Current Arizona Contractor’s license in good standing.
- Good standing with Better Business Bureau including no outstanding complaints.
- Completion of program administered training on the use of CheckMe!® diagnostic software for the analysis of pre- and post-installation HVAC air flow and charge. Licensed use of the CheckMe!® diagnostic software is provided to participating contractors at no cost through the Program; and
- Completion of program administrative processes training.

54. Budget. See TABLE 1: TEP’S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

55. Delivery and Marketing. TEP provides program management, including marketing, recruitment, training, and oversight. TEP also provides data tracking, rebate processing and technical support.

56. TEP markets the Program through website promotion, community interest groups, radio, newspapers, brochures, bill inserts, high bill inquiries, trade ally marketing efforts, contractor enrollment and training.

57. Cost-effectiveness. Most of the Existing measures passed cost-effectiveness, with benefit-cost ratios ranging from 1.00 to 2.66. (Please see Appendix A-1 for additional detail.)

58. Four Existing measures did not pass cost-effectiveness. These consist of two measures offering duct testing and repair with a minimum 14% reduction in leakage, and two measures offering replacement of burned out heat pump or air conditioning equipment, along with quality installation, and duct testing and repair, also resulting in a minimum 14% reduction in leakage:

- DTR_≥14% Reduction leakage (All electric);
- DTR_≥14% Reduction leakage (Dual fuel);
- HVAC_QI-DTR _≥14% Reduction leakage (All electric); and
- HVAC_QI-DTR _≥14% Reduction leakage (Dual fuel).

(No energy savings from new equipment is counted for the latter two measures.)

59. Staff Recommendations. Staff has recommended that this existing program be approved for continuation, with the exception of those measures not passing cost-effectiveness.

Shade Trees

60. Program Description. The Shade Tree Program is an ongoing element of the Implementation Plan, approved in Decision No. 70455 (August 6, 2008). No modifications have been proposed for the Shade Tree Program. The Shade Tree Program promotes energy conservation and environmental benefits by motivating customers to plant desert-adapted trees in locations where the trees will provide shade and reduce HVAC load. TEP customers may purchase shade trees for \$8.00 per tree, if they agree to plant the trees on the east, west, or south sides of their homes. In addition, there are Community and Schools tree planting projects, but these must meet the planting criteria outlined for planting residential trees.

61. Program Objectives and Rationale. The objective of the Program is to promote the strategic planting of trees to provide shade, thereby reducing the cooling load of homes and associated energy usage, and to educate school-age children and the public on the conservation and environmental benefits of planting trees.

62. Proposed Changes. No modification of the Shade Tree Program was proposed. Cost-effectiveness was recalculated based on information from the APS Shade Tree Program. The Program remains cost-effective.

63. Eligibility. All Residential customers in TEP's service area are eligible to participate, as long as they own single-family detached homes, townhomes, and mobile homes. Small businesses, schools, and community organizations may also participate if they follow the tree type and planting requirements.

64. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

65. Delivery and Marketing. TEP partners with Trees for Tucson, a local non-profit organization that manages and administers the Program. TEP provides the incentives for trees planted using Shade Tree Program guidelines.

...

66. Due to the popularity of the Shade Tree Program, EE revenues are not normally allocated for advertising and promotion. TEP employees currently inform customers about the Shade Tree Program during speaking engagements and outreach presentations. Other efforts entail website promotion, newspaper advertising, planting and care brochure, presentations at schools, tree tours, and tree care workshops.

67. Cost-Effectiveness. This Existing program has a benefit-cost ratio estimated at 1.34.

68. Staff Recommendation. Staff has recommended that the TEP Shade Tree Program be approved for continuance.

Low-Income Weatherization

69. Program Description. The Low-Income Weatherization ("LIW") Program is an existing program designed to enhance the energy efficiency of TEP customers in households with limited incomes (up to 150% of federal poverty guidelines).

70. Program Objectives and Rationale. The primary goal of the LIW Program is to fund weatherization for low-income homes, to reduce their energy costs and improve comfort and safety for low-income customers.

71. Proposed Changes. No modifications were originally proposed for the LIW program in the Plan. In communication with Staff, the Company is now requesting to change eligibility from 150% of Federal Poverty Level ("FPL") to 200% of FPL.

72. Analysis. The Department of Energy's Weatherization Assistance Program ("WAP") maintains an eligibility of 200% of FPL and utility weatherization funds are often combined with WAP funds. Increasing TEP's eligibility level to 200% of FPL would decrease the cost of program administration and increase the impact of additional DOE monies for TEP ratepayers. Updating eligibility would also allow customers who more recently experienced a drop in income, such as from a job loss, to participate in the Program.

73. Eligibility. Program participants must be customers of TEP. Currently, TEP bases eligibility for the LIW Program at 150% of FPL. TEP is proposing to change eligibility for the LIW Program from 150% of FPL to 200% of FPL.

...

1 74. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
2 the sector, projected costs per category, and total budget for each program.

3 75. Delivery and Marketing. TEP's LIW Program is delivered by community action agencies
4 approved by the Governor's Office on Energy Policy ("GOEP"). Agencies such as Pima County
5 Community Services and the Urban League provide program administration, planning, promotion and
6 verification of eligibility, as well as labor, materials, equipment and tracking. Funding is provided to
7 agencies once TEP receives documentation of completed work.

8 76. Issues. There is low participation from some agencies due to the loss of American
9 Recovery and Reinvestment Act ("ARRA") funding which has reduced budgets and staffing. GOEP
10 is advising agencies on best practices to maximize funding. In addition, the requested change in
11 eligibility from 150% of FPL to 200% of FPL would make it easier to use allocated funding.

12 77. In 2013 TEP saw a significant increase in the amount of funding being requested per
13 home. TEP believes that the housing stock available for weatherization is shifting from evaporative
14 cooling toward air conditioning. This creates greater opportunities for energy efficiency, but also
15 means that the costs per home will continue to increase.

16 78. Cost-effectiveness. The LIW Program has a benefit-cost ratio of approximately 1.22

17 79. Eligibility At Other Utilities. The APS weatherization program bases eligibility on 200% of
18 FPL. UNS Gas and UNS Electric track with LIHEAP, which is currently at 150% of FPL except
19 where 60 percent of a state's median income is higher. Southwest Gas bases eligibility at 150% of
20 FPL.

21 80. Recommendations. Changing TEP's eligibility from 150% to 200% of FPL will allow the
22 Company to make more efficient use of allocated funds. Staff has recommended that TEP's eligibility
23 be changed to 200% of FPL.

24 **Multi-Family Housing Efficiency Program**

25 81. Program Description. The proposed Multi-Family Housing Efficiency Program ("Multi-
26 Family Program") would promote energy efficiency in the residential multi-family sector, to properties
27 with five or more units to install CFLs and low-flow showerheads. Multi-family facility managers
28

1 would also be encouraged to participate in the C&I Comprehensive Program for installation of energy
2 efficiency improvements to common areas.

3 82. Program Analysis/Issues. Barriers to energy efficiency programs in the multi-family market
4 segment include: (i) split incentives, (ii) lack of capital, and (iii) lack of information about energy
5 efficiency improvements. These barriers are described in more detail, below.

6 83. Split Incentives. "Split incentives" describes the problem that arises in promoting energy
7 efficiency in rental units. The builders who construct rental properties, and the owners who would be
8 responsible for upgrades, do not usually pay the energy bills. Consequently, builders and owners do
9 not directly benefit from the lower energy costs that arise from investing in efficiency measures,
10 reducing or eliminating their incentive to participate in energy efficiency programs. At the same time,
11 the renters who would benefit from lower energy bills have no direct influence over original
12 construction and, with respect to renovations or retrofits, may not have the authority, the incentive or
13 the means to invest in energy efficiency for housing they do not own.

14 84. Lack of Capital and Awareness. Other problems can include a lack of capital for
15 improvements and a lack of awareness about energy efficiency. The Multi-Family Program would
16 address both through direct installation of low cost energy efficiency improvement in existing
17 complexes and through energy efficiency improvements to common areas.

18 85. Cost-Effectiveness. Based on Staff's analysis, the benefit-cost ratio for the three proposed
19 direct install measures ranges from 2.23 to 3.67. (Please see Appendix A-2 for additional detail.)

20 86. Staff Recommendation. With respect to the proposed new Multi-Family Program, Staff does
21 not recommend approval at this time because of the Commission's desire to preserve the status quo
22 while it evaluates the effectiveness of existing programs and measures.

23 NON-RESIDENTIAL PROGRAMS

24 87. TEP Request Regarding Commercial Customer Eligibility. TEP has requested that the
25 Commission approve the offering of all commercial measures to all customers participating in any
26 commercial program. Because program costs may vary significantly from program to program, and
27 because the usage patterns for various types of Non-residential customers also varies, a measure that is
28 cost-effective in one program may not be cost-effective in another. Staff has recommended that the

Commission not approve offering all commercial measures to all customers participating in any commercial program.

C&I Comprehensive

88. Program Description. The Program offers incentives to Non-residential customers for installing cost-effective retrofit and replace-on-burnout ("ROB") measures in existing facilities. The C&I Comprehensive Program provides incentives to TEP's large Non-residential customers to install measures such as energy-efficient lighting equipment and controls, HVAC equipment, motors and motor drives, compressed air and leak-repair measures, and refrigeration. Originally approved in Decision No. 70403 (July 3, 2008), the Program was then named the Non-residential Existing Facilities Program.

89. Program Objectives and Rationale. The Program addresses high first costs and limited investment capital for retrofits and ROBs, limited awareness of the potential energy savings and requirements for short-term payback.

90. Proposed Changes. New measures were proposed for this program.

91. Eligibility. The Program is available to all existing commercial customers within TEP's service territory. Although targeted to large commercial and industrial customers, small business customers and school facilities are allowed to participate in the C&I Comprehensive Program as long as funds are available.

92. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program. Participation in this program has been greater than anticipated. The Company is requesting a budget that will allow it to accommodate participation at the current level through 2015. The requested budget is lower than the budget currently approved by the Commission.

93. Delivery and Marketing. The Program promotes participation either directly by large commercial customers, or through installing contractors. Marketing includes educational seminars tailored to the business market, website promotion, presentations at professional and community forums and direct outreach to customers.

...

1 94. Cost-effectiveness. Most of the Existing measures are cost-effective, with the exception of
2 High Efficiency Ice Makers, Standard T8 Lighting, and Variable Speed Screw Compressors. The 18
3 SEER Packaged and Split AC measures approaches cost-effectiveness at 0.96 and Staff has
4 recommended that it be approved for continuance because the measure is likely to be cost-effective in
5 practice. The remaining Existing measures are cost-effective in a range 1.00 to 6.72.

6 95. A majority of the proposed measures also pass, in a range from 1.00 to 10.85, although
7 the Cooling Tower Subcooling, EMS-Lighting Schedule, LED Channel Signs and Refrigerated Display
8 Gaskets measures failed. High Performance Glazing is a proposed measure that approaches cost-
9 effectiveness at 0.97. (Please see Appendix A-1 for additional detail.)

10 96. Staff Recommendations. Staff has recommended that cost-effective existing measures listed
11 in Appendix A-1 remain in place, and that any non-cost-effective existing measures be terminated.
12 Staff has also recommended that the 18 SEER Packaged and Split AC measure also remain in place,
13 because its benefit-cost ratio is close to 1.0 and the measure is likely to be cost-effective in practice.

14 97. With respect to the proposed new measures, Staff does not recommend approval at this
15 time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness
16 of existing programs and measures.

17 Commercial New Construction

18 98. Program Description. The Commercial New Construction Program is an existing program
19 approved in Decision No. 70459 (August 6, 2008). No modifications are planned for this program.
20 The Program is performance based and targets owners/developers of new commercial facilities,
21 providing incentives for commercial facilities incorporating energy-efficient construction and designs.
22 Incentives go to both the owner and developer, and to design teams. In addition, the Program
23 provides technical support and consumer education regarding energy efficiency options for new
24 commercial construction.

25 99. Program Objectives and Rationale. The primary goal is to encourage more energy- efficient
26 building designs in TEP's service area. It encourages commercial building owners and developers and
27 the design community to consider incorporating energy efficiency as early as possible in the design
28 process.

100. Eligibility. Participation is limited to owners, developers, and designers involved in constructing new commercial buildings in TEP's service territory.

101. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program. Demand for this program has increased, and the Company anticipates that it will remain steady throughout 2014. TEP is requesting a budget comparable to its currently-approved budget.

102. Delivery and Marketing. The IC collects data, compares the building design to ASHRAE 90.1 Standard 2004 version and verifies energy savings and costs. There are no significant changes planned for delivery or marketing for this program.

103. Cost-effectiveness. The existing measures are cost-effective, with benefit-cost ratios in a range from 1.00 to 5.31, with the exception of EER Rated Packaged AC (11.5-20 tons, 11.24 EER). The Design Assistance Incentives measure, however, has no energy savings allocated to it and Staff does not, for this reason, consider it cost-effective.

104. Staff Recommendations. Staff has recommended that the Commercial New Construction Program remain in place, but that the EER-Rated Packaged AC (11.5-20 tons, 11.24 EER) measure and the Design Assistance Incentives measure be terminated.

Bid for Efficiency

105. Program Description. The Bid for Efficiency ("BFE") Pilot is a proposed program. There are no individual measures in the BFE Program. Customers or project sponsors can design their own EE projects and then bid competitively for incentives within program guidelines. BFE participants and project sponsors include commercial customers, Energy Service Companies ("ESCOs") or other aggregators who organize proposals that involve multiple sites. Results will be verified through Measurement, Evaluation, and Research activity.

106. Program Objectives and Rationale. The Program fosters customer-driven project activity (e.g., customers select appropriate measures and professionals to implement measures), and encourages the implementation of comprehensive, multi-measure projects. BFE encourages customers and project sponsors to think creatively and to develop projects designed to optimize system energy use as a whole, rather than considering the energy usage of each individual piece.

107. Proposed Changes. The Bid for Efficiency Program is proposed.

108. Eligibility. The Bid for Efficiency Program would be available to Non-residential customers in TEP's service territory.

109. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

110. Delivery and Marketing. The Program is delivered through an IC. TEP markets the Program directly to key customers and aggregators. Particular emphasis is paid to key market sectors such as grocery and convenience stores. TEP, and/or its IC, conducts informational meetings with potential participants and project sponsors to explain the Program rules and encourage participation.

111. The IC (i) collects necessary data from applications and verifies that all necessary information is provided by the customer (ii) compares individual bids and verifies analysis of energy savings and estimated cost from each bid; (iii) selects jobs based on the lowest cost per kWh reduction and notifies applicants of the award; and (iv) conducts post-installation inspection and verification of installation.

112. Cost-effectiveness. Based on Staff's analysis, the benefit-cost ratio for the proposed new Bid for Efficiency Program is 1.52.

113. Staff Recommendations. With respect to the proposed new Bid for Efficiency Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

Retro-Commissioning

114. Program Description. The Retro-Commissioning ("RCx") Program is a proposed new program. The Program would use a systematic approach to identify building equipment and processes that are not achieving optimal efficiency in existing facilities. Eligible program applicants receive free screening energy audits. Participants also receive training to ensure proper operating and maintenance practices over time.

115. Program Objectives and Rationale. The RCx Program seeks to generate significant energy savings by returning existing equipment to an efficient operating condition. The Program delivers customer benefits by lowering energy bills and improving building performance and occupant comfort

1 while reducing maintenance calls. The Program develops an RCx contractor pool, and enables TEP to
2 build relationships with C&I customers, thus leading to other areas of participation in TEP's portfolio
3 of EE programs. RCx programs in other utility service territories have delivered average energy
4 savings in the range of 5-15% per facility, and measures implemented as a result of the Program's
5 activity typically pay for themselves in less than two years.

6 116. Proposed Changes. Retro Commissioning is a proposed program.

7 117. Eligibility. Commercial customers in TEP's service territory would be eligible for this
8 program.

9 118. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
10 the sector, projected costs per category, and total budget for each program.

11 119. Delivery and Marketing. The RCx Program is marketed using traditional forms of media
12 (e.g., print, web, newsletters, etc.), as well as targeted direct mail and outreach to engineering and trade
13 associations. TEP and the IC also reach out directly to contractors who currently are, or could be,
14 practicing in this area. The TEP website has been updated to include information and links for
15 participation. TEP account managers have been utilized to reach out to larger customers to encourage
16 participation.

17 120. Cost-effectiveness. Based on Staff's analysis, the benefit-cost ratio for the proposed new
18 Retro-Commissioning Program is 2.46.

19 121. Staff Recommendations. With respect to the proposed new Retro-Commissioning
20 Program, Staff does not recommend approval at this time because of the Commission's desire to
21 preserve the status quo while it evaluates the effectiveness of existing programs and measures.

22 Small Business Direct Install & School Facilities

23 122. Program Description. The Small Business Direct Install ("SBDI") Program is an existing
24 TEP Non-residential program approved in Decision No. 70457 (August 6, 2008). The Program
25 provides incentives directly to contractors for the installation of high efficiency measures at existing
26 small business facilities. These measures include lighting, motors, HVAC and refrigeration measures
27 for smaller Non-residential customers.

28 ...

1 123. Proposed Schools Facilities Component. Originally, the Company filed to create a separate
2 School Facilities Program, similar the existing SBDI Program, but with a separate budget. The
3 Company is now proposing to make School Facilities a component of SBDI. The modified Program
4 would include a component providing incentives to contractors for providing turnkey energy
5 efficiency installations at existing school facilities. The modified Program would utilize the same
6 delivery method and pay incentives for the same measures offered by the existing SBDI Program. The
7 UNS Electric Schools Program was combined with the UNSE C&I Program in Decision No. 74262.
8 (January 6, 2014.) The modified Program would utilize the same delivery method and pay incentives
9 for the same measures offered by the existing SBDI Program.

10 124. Program Objectives and Rationale. The primary purpose of the existing component
11 of the Program is to promote the installation of energy efficiency measures by small commercial
12 customers at existing facilities. The primary purpose of the proposed new Schools Facilities
13 component is to promote the installation of energy efficiency measures by schools at their existing
14 facilities.

15 125. Proposed Changes. TEP initially proposed the new School Facilities Program as a
16 separate program, but is now proposing to combine it with the existing SBDI Program. The Schools
17 Facilities component would be similar to the current SBDI Program, but would target schools rather
18 than small commercial customers.

19 126. Issues. TEP has experienced slower-than-anticipated ramp-up since Decision No.
20 73910. The funding level requested by the Company will allow it to expand its efforts to increase
21 participation by small businesses in its service territory. This funding level is less than the current
22 approved budget for the Program. The Company states that the Program will remain cost-effective,
23 increasing in cost-effectiveness as participation improves.

24 127. Eligibility. The existing Program is open to commercial customers within TEP's
25 service territory who are taking service under a small commercial rate tariff. The modified program
26 would be open to all existing K-12 school facilities, including charter schools, within TEP's service
27 territory.

28 ...

128. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

129. Delivery and Marketing. TEP's IC is the primary contact for small business customers. The IC handles the application and incentive processing, monitors the installation contractors, tracks and reports participation and is responsible for quality control and management of the delivery process.

130. Cost-effectiveness. Most of the Existing SBDI measures are cost-effective, with benefit-cost ratios ranging from 1.01 to 3.38. The following existing measures are not cost-effective: Screw-in cold cathode CFLs; and Standard T8 Lighting.

131. Most of the proposed measures are cost-effective in a range from 1.02 to 4.12. The proposed 16 SEER Packaged and Split AC measure approaches cost-effectiveness at 0.96 and is likely to be cost-effective in practice. Advanced Power Strips—Occupancy Sensors are not cost-effective, nor is Standard T8 Lighting.

132. Staff Recommendations. Staff has recommended that cost-effective existing measures be approved for continuance. The two non-cost-effective existing measures, as listed above, should be terminated. With respect to the proposed new measures, the two non-cost-effective measures should not be approved and Staff does not recommend approval of the cost-effective measures because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures.

133. Staff has recommended that schools be eligible to participate in the existing SBDI Program to the extent that the measures installed would be cost-effective. (see Appendix 1-A)

CHP Program-Pilot

134. Program Description. The CHP Program is a proposed pilot. Combined Heat and Power ("CHP") also defined as "cogeneration", means a system that generates electricity and useful thermal energy in a single integrated system. TEP proposes this program for use by C&I customers as allowed in the Electric Energy Efficiency Rules, A.A.C. R14-2-2404(F). TEP originally planned a CHP Program in which it would work with Southwest Gas, but does not wish to be limited to working with a single gas utility.

135. TEP is planning two projects, described below. The Company is not paying incentives, but is seeking to recover approximately \$2,600 in Delivery costs. TEP is also seeking to count the energy savings from these projects toward the EE Standard:

- Pima County Jail: The project consists of a 100 kW generator (operates 24 hours/day) which utilizes the waste energy to heat the existing domestic hot water supply. Estimated annual kWh savings (generator output) = 750,000 kWh per year.
- University of Arizona Health Sciences Center (UAHSC): The project consists of a 5.5 MW generator (operates 24 hours/day) which utilizes the waste energy to provide steam for the UAHSC's existing steam processes. Estimated annual kWh savings (generator output) = 41 Million kWh per year.

136. Program Objectives and Rationale. The Company states that CHP is an affordable, clean, and reliable source of generation for meeting Arizona's energy needs and should be considered a key component to economic strategies. The market potential for CHP could contribute significantly to energy conservation in Arizona.

137. Program Eligibility. Customers must receive electric service from TEP to be eligible for participation. The CHP customer must comply with the Net Metering Rules and TEP's Rider R-4 efficiency minimums (42.5% efficiency or greater) to qualify.

138. Products and Services. TEP assists customers interested in CHP with engineering and interconnection services. Qualifying CHP customers save on utility bills by not having to utilize a Partial Requirement Service rate.

139. Delivery Strategy, and Administration. TEP provides program delivery, administration and assists with interconnection design expertise.

140. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

141. Delivery and Marketing. Information regarding Rider R-4 is available to customers through TEP's website www.tep.com. Local gas providers also notify customers of the advantages of CHP and suggest they contact TEP for assistance. Because each CHP project has unique characteristics, customers must contact TEP and request engineering and interconnection assistance.

...

142. Cost-effectiveness. Each project is different, and each project must be evaluated individually, but Staff estimates cost-effectiveness at 6.66.

143. Recommendations. With respect to the proposed new Combined Heat and Power Program, Staff does not recommend approval at this time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing programs and measures. Staff has recommended, however, that TEP be allowed to count toward the Energy Efficiency Standard any savings arising from CHP projects in its service territory that conform to the requirements of the Energy Efficiency Rules.

BEHAVIORAL SECTOR

Behavioral Comprehensive

144. Program Description. Behavioral Comprehensive is a proposed new program. It would offer new educational/behavioral subprograms including (i) Direct Canvassing, (ii) CFL Promotion and Outreach; and (iii) In-Home Energy Displays. In addition, the existing K-12 Education and Community Education subprograms would be moved into the Behavioral Comprehensive from the Consumer Education and Outreach Program.

145. Below is a table listing and describing the various components of the Behavioral Comprehensive Program.

Subprogram	Status	Description
Direct Canvassing	Proposed	Door to door awareness and direct install campaign
K-12 Education	Existing	Classroom education including take home direct install kits
Community Education	Existing	"Train the trainer" approach and direct install kits
CFL Promotion and Outreach	Proposed	CFL bulb promotion and education at outreach events
In-Home Energy Displays	Proposed	In Home Energy Displays intended to inform customers of 15 minute interval data to cause behavioral changes.

146. Program Objectives and Rationale. The main objective of the Program is to promote (i) habitual behaviors, such as adjusting thermostats, and turning off unnecessary lights; (ii) small ...

1 purchases, such as CFLs, and encourage HVAC maintenance; and (iii) larger purchases of energy-
2 efficient appliances.

3 147. Proposed Changes. Two pre-existing measures, K-12 Education and Community
4 Education, will be shifted to Behavioral Comprehensive from the existing Consumer Education. TEP
5 also proposes to add three new measures.

6 148. Eligibility. Residential customers in TEP's service territory are eligible to participate.

7 149. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
8 the sector, projected costs per category, and total budget for each program.

9 150. Delivery and Marketing. Delivery of the Program is by TEP staff, except for the K-12
10 measure, which is delivered by the Environmental Education Exchange.

11 151. Cost-effectiveness. The existing K-12 and Community Education subprograms are cost-
12 effective, with ratios of 2.57 and 2.16. The proposed CFL Outreach and Direct Canvassing
13 subprograms are cost-effective, with ratios of 1.85 and 1.88. In-Home Energy Displays are not cost-
14 effective at 0.60 and have been discontinued.

15 152. Staff Recommendations. Staff has recommended that the existing subprograms, K-12 and
16 Community Educations, remain in place until further Commission action. With respect to the
17 proposed new Behavioral Comprehensive Program, Staff does not recommend approval of the pro-
18 posed new subprograms at this time because of the Commission's desire to preserve the status quo
19 while it evaluates the effectiveness of existing programs and measures.

20 Home Energy Reports

21 153. Program Description. This Program is inactive. Home Energy Reports provided energy
22 reports to customers regarding their energy consumption patterns in comparison to other customers.
23 The intent of the Program was to inspire customers to decrease their energy usage based on this
24 information. Although cost-effective for TEP, it was not cost-effective for UNS Electric, and the
25 Program was not approved for UNS Gas customers. Because the Program cannot utilize economies
26 of scale, as well as customer complaints, TEP decided not to renew the contract with the vendor of
27 this program for 2014.

28 ...

1 154. The Company negotiated with the vender to maintain the web-based home energy
2 report and savings plan tools. TEP will be issuing an RFP in an effort to find a delivery model for
3 home energy reports that provides greater cost-effectiveness and better consumer satisfaction.

4 155. Program Objectives and Rationale. The objective of the Program was to generate savings
5 for the TEP portfolio, to promote the Company's other EE programs, and lower energy bills for
6 consumers.

7 156. Proposed Changes. The Company is seeking a new delivery model in order to make
8 Home Energy Reports more cost-effective and consumer-friendly.

9 157. Eligibility. Residential customers in TEP's service territory will be eligible to
10 participate.

11 158. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
12 the sector, projected costs per category, and total budget for each program.

13 159. Delivery and Marketing. A new delivery and marketing model has yet to be established
14 for this program.

15 160. Cost-effectiveness. Cost-effectiveness should be re-evaluated based on the new delivery
16 model. The evaluation should include all costs associated with the Program and only those savings
17 which can be reasonably attributed to the Home Energy Reports.

18 161. Staff Recommendations. Staff has recommended that the Program remain inactive until
19 further order of the Commission.

20 **SUPPORT SECTOR**

21 **Consumer Education and Outreach**

22 162. Program Description. The Consumer Education and Outreach ("CEO") Program is an
23 existing program, approved by the Commission in Decision No. 70402 (July 3, 2008). The CEO
24 Program is intended to both increase participation in TEP's DSM/EE portfolio of programs and to
25 effect a broader market transformation.

26 163. The CEO Program has an advertising component covering seasonal advertisements
27 including energy saving tips, the on-line energy audit, and the marketing of other EE programs. The
28 CEO Program also provides Time-of-Use education for Residential and Small Commercial customers,

1 to teach them about the benefit of TOU rates and enable them to maximize savings through load
2 shifting.

3 164. Program Objectives and Rationale. The Program consists of educational and marketing
4 material to inform customers on how to achieve energy savings and about the benefits of
5 conservation.

6 165. Proposed Changes. The K-12 and Community Education subprograms are being moved
7 into the Behavioral Comprehensive Program.

8 166. Eligibility. The CEO Program targets Residential and Small Commercial customers in
9 TEP's service territory.

10 167. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists
11 the sector, projected costs per category, and total budget for each program.

12 168. Delivery and Marketing. The CEO Program utilizes radio, print, bill stuffers and social
13 media, and these are overseen by utility staff, which also oversees the development of customer
14 questionnaires and surveys.

15 169. Cost-effectiveness. The Company notes that this educational and marketing program does
16 not produce direct energy savings and is part of the cost-effectiveness of the portfolio as a whole. In
17 contrast, A.A. C. R14-2-2410(F) states that "Educational programs shall be analyzed for cost-
18 effectiveness based on estimated energy and peak demand savings resulting from increased awareness
19 about energy use and opportunities for saving energy."

20 170. Staff Recommendations. Staff has recommended that the Consumer Education and
21 Outreach Program be retained, but that it be analyzed in accordance with A.A.C. R14-2-2410(F) and
22 that this information be provided in the progress reports filed in compliance with the Energy
23 Efficiency Standards.

24 Energy Codes and Standards and Waivers of A.A.C. R14-2-2404(E)

25 171. Program Description. This is a proposed TEP program. Specific program activities will
26 depend on the needs of the local code officials. Possible activities include the following:

27 ...

28 ...

- Education of local code officials and building professionals on existing standards;
- Providing documentation of the specific local benefits of code enforcement, which can promote energy code changes over time;
- Ensuring utility incentive programs align with local energy codes and appliance standards;
- Collaboration with relevant stakeholders to build a more robust community, with the goal of advancing strong, effective building energy codes and appliance standards across the local jurisdictions within TEP's service territory;
- Advocating for energy code and appliance standards updates over time; and
- Participation in the legislative process to gain approval for new code adoption.

172. Program Objectives and Rationale. The Program will employ a variety of tactics aimed at: i) improving levels of compliance with existing building energy codes and appliance standards; and ii) supporting periodic updates to energy codes and appliance standards as warranted by market conditions.

173. Under R14-2-2404(E) of the EE Rule, utilities are allowed to claim an energy savings credit for building codes. R14-2-2404(E) states as follows:

"An affected utility may count toward meeting the standard up to one third of the energy savings, resulting from energy efficiency building codes, that are quantified and reported through a measurement and evaluation study undertaken by the affected utility."

174. Waivers. TEP is requesting two waivers of A.A.C. R14-2-2404(E) in relation to the Program:

- A waiver from A.A.C. R14-2-2404(E) to allow TEP to count energy savings resulting from EE appliance standards, as was approved for UNS Electric (Decision No. 72747, January 20, 2012) and APS (Decision No. 73089, April 5, 2012).
- A waiver from A.A.C. R14-2-2404(E) to allow TEP to count toward meeting the EE Standard 100% of the energy savings resulting from updates in EE building codes and EE appliance standards.

175. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

176. Cost-effectiveness. Staff believes that additional review is necessary so that a reasonable benefit-cost ratio can be established for Code activities.

177. Staff Recommendations. In order to maintain the status quo with respect to EE measures and programs, Staff has recommended that the Codes Program not be approved.

178. Should the Company opt to engage in Code activities outside a program, but in accordance with R14-2-2404(E), Staff has recommended the following.

- That TEP not receive a waiver to use 100% of building code savings. Use of 100% of building code savings is not reasonable. APS requested a similar waiver and was not granted one. (Decision No. 74406).
- That TEP be granted a waiver from R14-2-2404(E) for up to one third of energy savings from energy efficiency appliance standards, if the energy savings are quantified and reported through a measurement and evaluation study undertaken by the Company.
- That, as with UNSE and APS, savings from changes to building and appliance codes may not be used in the energy savings calculations used to determine the amount of the Company's Performance Incentive.

UTILITY IMPROVEMENT SECTOR

Program Development, Analysis and Reporting

Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade.

179. The Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade programs are TEP's proposed Utility Improvement programs. The Conservation Voltage Reduction Program would produce demand and energy savings through the physical adjustment of transformer settings governing voltage at the substation level. The Facilities Upgrade Program would include installation of high efficiency motors and variable speed drives, along with projects to reduce a power plant's auxiliary power or increase capacity.

...

1 180. In its Plan, the Company asked that all the costs associated with the Conservation
2 Voltage Reduction Program be recovered through the DSM surcharge. With respect to the
3 Generation Improvement and Facilities Upgrade Program, TEP also requested a waiver of A.A.C.
4 R14-2-2404(H) to allow TEP to count energy savings from improvements in its utility delivery system
5 toward the Standard. TEP is requesting to recover only the administrative costs associated with
6 preparing, reporting and validating savings.

7 181. Commission Decision Regarding APS Generation and Delivery System Improvements and Facilities
8 Upgrades. Decision No. 74406 allowed APS to count energy savings resulting from generation and
9 delivery system improvements and facilities upgrades toward the EE Standard. APS did not request
10 that the costs be recovered through the APS DSM surcharge, only that the savings count toward
11 meeting the Standard. In addition, savings from generation and delivery system improvements are not
12 permitted to increase the Lost Fixed Cost Recovery ("LFCR"), qualify for performance incentive, or
13 otherwise increase the performance incentive amount.

14 Staff Recommendations

15 182. Staff has recommended that the Conservation Voltage Reduction and Generation
16 Improvement and Facilities Upgrade programs be approved, but that TEP not be allowed to recover
17 the associated costs through the DSM surcharge, thereby having no impact on the status quo with
18 respect to new program costs. Staff believes that these proposed in-house programs to improve the
19 Company's physical plant may benefit ratepayers, but that the costs related to them should be
20 evaluated for recovery in a rate case. Staff also has recommended that the requested waiver be
21 approved, but that any savings not be used to increase the LFCR, qualify for performance incentive,
22 or otherwise increase the performance incentive amount.

23 DEMAND RESPONSE SECTOR

24 C&I Direct Load Response

25 183. Program Description. The C&I Direct Load Control program is an existing program
26 approved by the Commission in Decision No. 71787 (July 12, 2010). C&I Direct Load Control is a
27 load curtailment program. Customers are compensated with incentives for their participation at
28 negotiated levels.

184. Program Objectives and Rationale. Modifications to controls for chillers, rooftop AC units, lighting, fans, and other end-uses can reduce demand at peak times or during emergencies. In addition, the Program can provide other benefits, including i) avoided firm capacity that would otherwise be required to meet reserve requirements; ii) reduced or avoided open-market power purchases during period of high energy prices; and iii) greater grid stability and reduction in outages.

185. Proposed Changes. No modifications are proposed for this program.

186. Eligibility. This program is open to Non-residential customers in TEP's service territory with demand of at least 100 kW.

187. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the sector, projected costs per category, and total budget for each program.

188. Delivery and Marketing. The Program is delivered on a turn-key basis by a third-party IC who negotiates load reduction agreements with multiple customers and aggregates these customers to provide TEP with a guaranteed load reduction capacity. Because the demand response aggregator is obligated to provide the required megawatts of load curtailment, the process is similar to a power purchase agreement.

189. Cost-effectiveness. The benefit-cost ratio for this program is estimated by Staff at 3.40.

190. Staff Recommendations. The C&I Direct Load Control Program is cost-effective, and Staff has recommended that the Commission approve it for continuance.

Related Filing Which May Impact the DSM Surcharge

191. Freeport-McMoRan Request for Exemption. On March 17, 2014, Freeport-McMoRan Copper & Gold, Inc. ("Freeport") filed an application requesting an exemption from Energy Efficiency programs and related surcharge. Freeport states that its exceptionally large consumption of electric power makes it "more efficient for the Company [Freeport] to pursue energy efficiency on its own behalf rather than as a participant or funder of utility energy efficiency programs."²

192. In its application, Freeport states that it has "historically budgeted some \$10 million annually on energy-related technology." In communication with Staff, Freeport explained that it

² Freeport has mining operations in Indonesia, North America, South America and the Democratic Republic of Congo, in addition to oil and gas assets in the U.S. and the Gulf of Mexico, and has reported approximately \$63.47 billion in total assets for 2013.

1 “has patents and patent applications around technology that consumes less energy per
2 pound of copper produced than the process it replaces. . . . The historic \$10 million
3 annual budget is spent seeking ways to more efficiently produce copper in the conduct
4 of our mining processes.”

5 193. Background. The basis for Non-residential DSM payments was altered in the most
6 recent TEP Rate case. Non-residential customers in TEP’s service territory now pay into the DSM
7 Surcharge based on a percentage of the bill, rather than on a per-kWh basis. Decision No. 73912,
8 June 27, 2013, stated that:

9 “‘The DSMS rate until further Order of the Commission is \$0.002232 per kWh for residential
10 customer and 2.5479 percent of the total bill (before RES, LFCR, assessments and taxes) for
11 non-residential customers.’”

12 194. Impact on Residential Customers. Exempting Freeport reduces the amount of revenue
13 Freeport contributes through the DSM Surcharge, but would also reduce the level of savings required
14 for TEP to meet the EE Standard, thereby reducing the cost of meeting the EE Standard. In the case
15 of a utility that is on a trajectory that would allow it to meet the EE Standard, the exemption of
16 Freeport could, potentially, result in lower EE costs for other ratepayers. However, TEP states that,
17 given the current level of DSM revenues, it does not expect to meet the 2014 Standard with or
18 without Freeport. The Company is, instead, trying to maximize savings per dollar spent based on its
19 approved budget. In this scenario, any exemption means that ratepayers remaining in the pool of
20 those paying into the DSM Surcharge will make up the difference. In the case of Freeport, Staff
21 estimates, and TEP confirms, that the impact on Residential customers will be approximately 14 cents
22 a month or \$1.68 per year.

23 195. Recent Projects and Incentives Received. In 2013 Freeport received incentives equaling more
24 than \$2.5 million from TEP for two projects at its mine in Sierrita, in TEP’s service territory. The two
25 projects are projected to save approximately 2.5 million kWh annually.

26 196. Although Freeport received significantly more in incentives in 2013 than it paid in
27 through the surcharge, TEP has informed Staff that, over time, Freeport has paid in more through the
28 surcharge than it has received in incentives.

29 197. Analysis. Energy efficiency benefits ratepayers of all classes by postponing or avoiding
30 new generation, and Residential and Non-residential customers are subject to the surcharge which

1 recovers TEP's costs associated with achieving this benefit. However, Paragraph 7.6 of the Settlement
2 Agreement states that:

3 "Any customer who can demonstrate an active DSM program and whose single site usage
4 is 25 MW or greater may file a petition with the Commission for an exemption from the
5 DSM adjuster and, if approved, will be removed from the Energy Efficiency Standard
denominator."

6 198. Freeport has demonstrated that it currently has an active DSM program at a 25 MW or
7 greater site. Therefore, it is in keeping with Decision No. 73912 to exempt Freeport-McMoRan
8 TEP's energy efficiency programs and surcharge. Staff also notes that Freeport is significantly
9 motivated to work toward more efficient uses of energy in order to control or reduce its costs.

10 199. Recommendations. Staff has recommended that Freeport be exempted from the DSM
11 surcharge until further order of the Commission, but not on a company-wide basis. As per the TEP
12 Settlement Agreement, the single location account above 25 MW located in TEP's service territory
13 (the Sierrita Mine) should alone be exempted. Other Freeport locations in the TEP service territory
14 should continue to pay into the DSM surcharge.

15 200. Staff has recommended, if the Freeport Sierrita location is exempted, that it no longer
16 receive any incentives from the TEP EE portfolio of programs.

17 201. Staff has recommended that the Commission require Freeport to pay into the TEP
18 DSM bank an amount equal to what it would have paid during the period of its exemption, along with
19 reasonable interest, should Freeport opt to return to non-exempt status regarding the TEP DSM
20 programs and surcharge.

21 202. Staff has also recommended that Freeport's exemption be limited in that it must
22 continue to report energy efficiency activities and savings on an annual basis, as verified by an
23 independent third party, to TEP.

24 203. Staff has also recommended that Freeport's energy savings be reported by TEP in its
25 Progress Report filed in March of each year.

26 204. Staff has also recommended that when TEP files its next EE Implementation Plan or
27 by October 1, 2015, whichever is sooner, TEP report what its budget and DSM surcharge would be
28 had Freeport not been exempted.

Performance Incentive

205. *Performance Incentive.* Decision No. 73912 states that the performance incentive should be calculated at 8 percent of the net benefits capped at \$0.0125 per kWh saved, similar to the performance incentive approved for APS in Docket No. E-01345A-12-0224.

206. Decision No. 73912, from the most recent rate case, ordered that:

“[T]he performance incentive, tied to the cost effective energy savings, shall be reviewed, established and approved as appropriate as part of the Commission’s Energy Efficiency Implementation Plan and DSM Surcharge reset proceedings for Tucson Electric Power Company.”

207. On March 2, 2014, TEP calculated a Performance Incentive of \$1,959,391 for 2013 as part of its annual DSM progress report. On April 10, 2014, TEP filed an updated calculation, based on lower kWh savings, resulting in the Performance Incentive being revised downward to \$1,879,095. Review of this filing indicates that the Performance Incentive was calculated in accordance with Decision No. 73912.

208. TEP is currently projecting a Performance Incentive of approximately \$1 million for 2014. This number may be revised based on actual net benefits and kWh savings for 2014.

DSM Surcharge Reset

209. *Background and Current DSM Surcharge.* The purpose of the DSM Surcharge is to recover the costs associated with the Company’s energy efficiency programs, including the Performance Incentive. In the most recent rate case, the Residential DSM Surcharge was set at \$0.002232 per kWh and the Non-residential DSM Surcharge was set at 2.5479% of total bill (before RES, LFCR, assessments and taxes). Staff believes that the DSM Surcharge should be reset to reflect the requested budget, the significantly decreased under-collection, and the potential Freeport exemption.

210. Below are comparisons of the current DSM Surcharge with (i) the updated DSM Surcharge, with participation by Freeport; and (ii) without participation by Freeport.

Current DSM Surcharge	
Residential	\$0.002232 per kWh
Non-residential	2.5479% of total bill (before RES, LFCR, assessments and taxes)

Reset of DSM Surcharge with participation by Freeport	
Residential	\$0.002149 per kWh
Non-residential	2.399% of total bill (before RES, LFCR, assessments and taxes)
Reset of DSM Surcharge without participation by Freeport	
Residential	\$0.002311 per kWh
Non-residential	2.466% of total bill (before RES, LFCR, assessments and taxes)

211. Below is a table showing estimated Residential bill impacts, based on average kWh use of the current DMS Surcharge, and the DMS Surcharges with and without participation by Freeport.

Residential Usage	kWh/month	Current per kWh	Monthly Bill Impact	Reset + Freeport	Monthly Impact + Freeport	Reset - Freeport	Monthly Impact - Freeport
Monthly Average	865.25	0.002232	\$1.93	0.002149	\$1.86	0.002311	\$2.00

212. Recommendations Regarding Reset. Staff has recommended that the DSM Surcharge be reset to \$0.002149 per kWh (Residential)/2.399% of total bill, before RES, LFCR, assessments and taxes (Non-residential) if the Commission decides not to approve Freeport's requested exemption from the DSM Surcharge. If the Commission decides to approve Freeport's requested exemption from the DSM Surcharge, Staff has recommended that the DSM Surcharge be reset to \$0.002311 per kWh (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).

Staff Recommendations

Requested Waiver

213. In accordance with A.A.C. R14-2-2404(B), TEP has requested a waiver of the EE Standard. TEP believes that, based on the current status of its EE Plan, and on other economic factors, it will not be able to meet the EE Standard for 2014 as set forth in A.A.C. R14-2-2404(B). TEP states that, notwithstanding its request for a waiver, it will continue to work toward the maximum cost-effective savings per dollar spent.

214. Staff has recommended that TEP be granted a waiver of the Energy Efficiency Standard ("EE Standard") until further Commission action.

...

CONCLUSIONS OF LAW

1
2 1. TEP is an Arizona public service corporation within the meaning of Article XV,
3 Section 2, of the Arizona Constitution.

4 2. The Commission has jurisdiction over TEP and over the subject matter of the
5 application.

6 3. The Commission, having reviewed the application and Staff's Memorandum dated
7 October 1, 2014, concludes that it is in the public interest to approve the Plan as discussed herein.

ORDERWaivers

8
9
10 IT IS THEREFORE ORDERED that the Energy Efficiency Standard set forth in A.A.C.
11 R14-2-2404(B) is waived for Tucson Electric Power Company until further order of the Commission.

12 IT IS FURTHER ORDERED that A.A.C. R14-2-2404(H) is waived for Tucson Electric
13 Power Company, to the extent that Tucson Electric Power Company may count cost-effective energy
14 savings from improvements to its facilities and generation systems toward compliance with the Energy
15 Efficiency Standard.

16 IT IS FURTHER ORDERED that A.A.C. R14-2-2404(E) is waived for Tucson Electric
17 Power Company, to the extent that Tucson Electric Power Company may count up to one third of
18 energy efficiency savings from energy efficiency appliance codes toward the Energy Efficiency
19 Standard.

20 IT IS FURTHER ORDERED that A.A.C. R14-2-2404(E) is not waived for Tucson Electric
21 Power Company to the extent that Tucson Electric Power Company may not count more than one
22 third of energy efficiency savings from energy efficiency building or appliance codes toward the
23 Energy Efficiency Standard.

Ongoing Cost-Effectiveness

24
25 IT IS FURTHER ORDERED that if Tucson Electric Power Company finds any
26 Commission-approved program or measure no longer cost-effective, Tucson Electric Power
27 Company shall file, in this docket, a letter stating that the program or measure will be discontinued.

28 ...

1 Budget

2 IT IS FURTHER ORDERED that Tucson Electric Power Company maintain its budget at
3 \$18,839,760.

4 Flexibility

5 IT IS FURTHER ORDERED that Tucson Electric Power Company have the flexibility to
6 move funding between cost-effective programs and measures, with the exception of the Low-income
7 Weatherization Program, as long as funding is restricted to cost-effective programs and measures and
8 is divided as evenly as is reasonably possible between Residential and Non-residential customers.

9 Freeport McMoRan Request for Exemption

10 IT IS FURTHER ORDERED that until further order of the Commission Freeport is
11 exempted from the DSM surcharge, but not on a company-wide basis. As per the Tucson Electric
12 Power Company Settlement Agreement, the single location account above 25MW located in Tucson
13 Electric Power Company's service territory (the Sierrita Mine) shall alone be exempted. Other
14 Freeport locations in the Tucson Electric Power Company service territory should continue to pay
15 into the DSM surcharge.

16 IT IS FURTHER ORDERED that the Freeport Sierrita site no longer receive any incentives
17 from the Tucson Electric Power Company EE portfolio of programs.

18 IT IS FURTHER ORDERED that Freeport shall be required to pay into the Tucson Electric
19 Power Company DSM bank an amount equal to what it would have paid during the period of its
20 exemption, along with reasonable interest, should Freeport opt to return to non-exempt status
21 regarding the Tucson Electric Power Company DSM programs and surcharge.

22 IT IS FURTHER ORDERED that Freeport's exemption be limited in that Freeport must
23 continue to report energy efficiency activities and savings on an annual basis, as verified by an
24 independent third party, to Tucson Electric Power Company.

25 IT IS FURTHER ORDERED that Freeport's energy savings be reported by Tucson Electric
26 Power Company in its Progress Report filed in March of each year.

27 ...

28 ...

1 IT IS FURTHER ORDERED that that when Tucson Electric Power Company files its next
2 EE Implementation Plan or by October 1, 2015, whichever is sooner, Tucson Electric Power
3 Company report what its budget and DSM surcharge would be had Freeport not been exempted.

4 Request for Commercial Cross-Program Eligibility

5 IT IS FURTHER ORDERED that Tucson Electric Company's request that it be allowed to
6 offer all commercial measures to all customers participating in any commercial program is hereby
7 denied.

8 Programs and Measures

9 IT IS FURTHER ORDERED that none of the measures listed under "Discontinued
10 Measures" are approved as part of Tucson Electric Power Company's EE portfolio.

11 IT IS FURTHER ORDERED that the Efficient Products Program remain in effect with the
12 existing cost-effective measure (CFLs) in place, but the proposed new measures are not approved.

13 IT IS FURTHER ORDERED that the proposed new Appliance Recycling Program is not
14 approved at this time.

15 IT IS FURTHER ORDERED that the existing Residential New Construction Program
16 remain in effect until further Commission order.

17 IT IS FURTHER ORDERED that the existing Existing Homes Program remain in effect
18 until further Commission order.

19 IT IS FURTHER ORDERED that the existing Shade Tree Program remain in effect until
20 further order of the Commission.

21 IT IS FURTHER ORDERED that the existing Low-Income Weatherization Program remain
22 in effect until further order of the Commission.

23 IT IS FURTHER ORDERED that eligibility for participating in the Low-Income
24 Weatherization Program be changed from 150% of the Federal Poverty Level to 200% of the Federal
25 Poverty Level.

26 IT IS FURTHER ORDERED that the proposed new Multi-Family Housing Efficiency
27 Program is not approved.

28 ...

1 IT IS FURTHER ORDERED that the Consumer Education and Outreach Program remain
2 in effect, but that it be analyzed in accordance with A.A.C. R14-2-2410(F) and that this information be
3 provided in the progress reports filed in compliance with the Energy Efficiency Rules.

4 IT IS FURTHER ORDERED that the Energy Codes and Standards Program not be
5 approved.

6 IT IS FURTHER ORDERED that the Conservation Voltage Reduction Program be
7 approved, but that there be no recovery for this program through the DSM Surcharge.

8 IT IS FURTHER ORDERED that the Generation Improvement and Facilities Upgrade
9 Program be approved, but that there be no recovery for this program through the DSM Surcharge.

10 IT IS FURTHER ORDERED that the DSM Surcharge be reset to \$0.002311 per kWh
11 (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).

12 IT IS FURTHER ORDERED that the C&I Direct Load Control Program remain in effect
13 until further Commission order.

14 IT IS FURTHER ORDERED that the C&I Comprehensive Program remain in effect until
15 further Commission order. Cost-effective existing measures listed in Appendix 1-A, including the 18
16 SEER Packed and Split AC measure, shall continue, while any non-cost-effective existing measures
17 shall be discontinued. No new measures are approved for the C&I Comprehensive Program.

18 IT IS FURTHER ORDERED that the Bid for Efficiency Program is not approved.

19 IT IS FURTHER ORDERED that the Retro-Commissioning Program is not approved.

20 IT IS FURTHER ORDERED that the Small Business Direct Install Program remain in effect
21 until further Commission order and that schools are eligible to participate in the Program to the extent
22 that such participation would be cost-effective. (see Appendix 1-A)

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1 IT IS FURTHER ORDERED that the Combined Heat and Power Program is not approved.

2 IT IS FURTHER ORDERED that Tucson Electric Power Company is allowed to count
3 toward the Energy Efficiency Standard any savings arising from CHP projects in its service territory
4 that conform to the requirements of the Energy Efficiency Rules.

5 IT IS FURTHER ORDERED that this Order is effective immediately.

6
7 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

8
9 _____
CHAIRMAN

COMMISSIONER

10
11
12 COMMISSIONER

COMMISSIONER

COMMISSIONER

13
14 IN WITNESS WHEREOF, I, JODI JERICH, Executive
15 Director of the Arizona Corporation Commission, have
16 hereunto, set my hand and caused the official seal of this
Commission to be affixed at the Capitol, in the City of
Phoenix, this _____ day of _____, 2014.

17
18 _____
19 JODI JERICH
EXECUTIVE DIRECTOR

20
21 DISSENT: _____

22
23 DISSENT: _____

24 SMO:JMK:sms\RRM
25
26
27
28

1 SERVICE LIST FOR: TUCSON ELECTRIC POWER COMPANY
2 DOCKET NO. E-01933A-13-0183

3 Michael Patten
4 Roshka DeWulf & Patten, PLC
5 One Arizona Center
400 East Van Buren, Ste. 800
Phoenix, Arizona 85004

6 Mr. Steven M. Olea
7 Director, Utilities Division
8 Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

9 Ms. Janice M. Alward
10 Chief Counsel, Legal Division
11 Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

APPENDICES

APPENDIX 1-A (Existing)

Programs and Measures	Status	Staff's Benefit-Cost Ratio	Total Incentives
Behavioral Comprehensive (formerly Consumer Education)			
K-12 Education Kit	Proposed	2.57	\$134,000
Community Education Kit	Proposed	2.16	\$13,500
C&I Comprehensive Program			
14 SEER Packaged and Split AC's	Existing	1.21	\$2,013
14 SEER Packaged and Split HP's	Existing	2.11	\$2,013
15 SEER Packaged and Split AC's	Existing	1.14	\$4,125
15 SEER Packaged and Split HP's	Existing	2.09	\$4,125
16 SEER Packaged and Split AC's	Existing	1.08	\$3,510
16 SEER Packaged and Split HP's	Existing	1.97	\$3,495
17 SEER Packaged and Split AC's	Existing	1.00	\$2,125
17 SEER Packaged and Split HP's	Existing	1.88	\$2,125
18 SEER Packaged and Split AC's	Existing	0.96	\$2,498
18 SEER Packaged and Split HP's	Existing	1.82	\$2,498
Air Cooled Chillers < 150 tons	Existing	2.13	\$15,000
Air Cooled Chillers > 150 tons	Existing	2.13	\$17,625
Anti sweat heater controls	Existing	2.23	\$7,200
Custom Measures	Existing	1.86	\$506,385
Daylighting controls	Existing	1.11	\$1,800
Delamping	Existing	4.92	\$38,250
EER Rated Packaged AC (< 5 tons ,11.36 EER)	Existing	1.24	\$1,000
EER Rated Packaged AC (> 20tons ,10.9 EER)	Existing	1.24	\$14,000
EER Rated Packaged AC (11.5 - 20 tons ,11.24 EER)	Existing	1.24	\$9,198
EER Rated Packaged AC (5.4 - 11.25 tons ,11.36 EER)	Existing	1.24	\$18,720
EER Rated Packaged HP (< 5 tons ,11.36 EER)	Existing	1.38	\$1,000
EER Rated Packaged HP (> 20 tons ,11.11 EER)	Existing	1.27	\$19,500
EER Rated Packaged HP (11.25 - 20 tons ,11.02 EER)	Existing	1.38	\$6,699
EER Rated Packaged HP (5.4 - 11.25 tons ,11.31 EER)	Existing	1.38	\$24,375
Energy efficient exit signs	Existing	1.52	\$11,250
Energy efficient ODP motors	Existing	3.25	\$2,000
Energy Efficient TEFC Motors	Existing	1.19	\$2,000
HIDs to T8/T5 - Exterior	Existing	3.30	\$26,250
HIDs to T8/T5 - Interior	Existing	3.25	\$153,000
High Efficiency Evaporator Fan Motors (PSC)	Existing	2.42	\$113
High Efficiency Evaporator Fan Motors (ECM)	Existing	1.97	\$2,813
High Efficiency Ice Makers	Existing	0.75	\$510
High Efficiency Reach-in Refrigerators and Freezers	Existing	2.21	\$9,375
Integral Screw In CFL	Existing	1.75	\$3,500
Hard Wire CFL	Existing	1.28	\$2,625
Occupancy sensors	Existing	1.44	\$50,000
Premium T8 Lighting	Existing	1.24	\$60,000
Programmable Thermostats	Existing	4.60	\$5,000
Screw in cold cathode CFL	Existing	2.35	\$35
Reach-In Cooler Controls ("Cool miser")	Existing	2.01	\$1,125
Standard T8 Lighting	Existing	0.74	\$22,500
Strip Curtains	Existing	3.79	\$250
Variable Speed Drives	Existing	2.42	\$213,300
Variable Speed Screw Compressor	Existing	0.85	\$9,800
Water Cooled Chillers - Centrifugal < 150 tons	Existing	1.21	\$30,493
Water Cooled Chillers - Centrifugal > 300 tons	Existing	1.21	\$100,493

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Water Cooled Chillers - Centrifugal 151 - 299 tons	Existing	1.21	\$53,087
Water Cooled Chillers - Reciprocating All Sizes	Existing	6.72	\$27,750
Water Cooled Chillers - Screw < 150 tons	Existing	2.01	\$1,452
Water Cooled Chillers - Screw > 300 tons	Existing	1.84	\$14,414
Water Cooled Chillers - Screw 151 - 299 tons	Existing	2.03	\$5,211
Commercial Direct Load Control			
Direct Load Control for Large Commercial	Existing	3.40	\$2
Commercial New Construction			
Design Assistance Incentives to Design teams	Existing	No savings assigned	\$0
EER Rated Packaged AC (> 20tons ,10.9 EER)	Existing	1.64	\$56,000
EER Rated Packaged AC (11.5 - 20 tons ,11.24 EER)	Existing	0.92	\$17,174
EER Rated Packaged AC (5.4 - 11.25 tons ,11.36 EER)	Existing	1.64	\$9,600
High Perf Glazing	Existing	1.00	\$510
Performance Rebates	Existing	5.31	\$187,200
Efficient Products			
ES Integral CFL	Existing	4.82	\$1,683,545
Existing Homes and Audit Direct Install			
DTR $\geq 14\%$ Reduction leakage (All electric)	Existing	0.97	\$11,250
DTR $\geq 14\%$ Reduction leakage (Dual fuel)	Existing	0.91	\$17,500
DTR $\geq 50\%$ Reduction leakage (All electric)	Existing	1.59	\$112,500
DTR $\geq 50\%$ Reduction leakage (Dual fuel)	Existing	1.73	\$67,500
ER HVAC_QI_DTR $\geq 14\%$ Reduction leakage (All electric)	Existing	1.00	\$39,025
ER HVAC_QI_DTR $\geq 14\%$ Reduction leakage (Dual fuel)	Existing	1.23	\$83,625
ER HVAC_QI_DTR $\geq 50\%$ Reduction leakage (All electric)	Existing	1.33	\$197,250
ER HVAC_QI_DTR $\geq 50\%$ Reduction leakage (Dual fuel)	Existing	1.62	\$328,750
ER HVAC with QI (All electric)	Existing	1.27	\$217,500
ER HVAC with QI (Dual fuel)	Existing	1.27	\$261,000
HVAC_QI_DTR $\geq 14\%$ Reduction leakage (All electric)	Existing	0.82	\$21,420
HVAC_QI_DTR $\geq 14\%$ Reduction leakage (Dual fuel)	Existing	0.87	\$34,425
HVAC_QI_DTR $\geq 50\%$ Reduction leakage (All electric)	Existing	1.20	\$144,750
HVAC_QI_DTR $\geq 50\%$ Reduction leakage (Dual fuel)	Existing	1.38	\$193,000
HVAC/QI (All electric)	Existing	1.01	\$77,250
HVAC/QI (Dual fuel)	Existing	1.04	\$154,500
Screw in CFL - Direct Install from Audit	Existing	2.66	\$90,000
Behavioral changes resulting from Energy Assessments	Existing	1.64	\$116,000
Home Energy Report Program			
Home Energy Reports	Existing	1.56	\$0
Low Income Weatherization			
Low Income Weatherization	Existing	1.22	\$232,800
Residential New Construction Program			
ENERGY Smart Homes (All Electric)	Existing	1.61	\$525,000
ENERGY Smart Homes (Dual Fuel)	Existing	2.26	\$525,000
Shade Trees Program			
Shade Tree	Existing	1.34	\$150,500
Small Business Direct Install			
14 SEER Packaged and Split AC's	Existing	1.13	\$1,131
14 SEER Packaged and Split HP's	Existing	1.85	\$2,263
15 SEER Packaged and Split AC's	Existing	1.07	\$188,263
15 SEER Packaged and Split HP's	Existing	1.83	\$4,525
16 SEER Packaged and Split AC's	Existing	1.07	\$5,775
16 SEER Packaged and Split HP's	Existing	1.74	\$5,775
Anti sweat heater controls	Existing	1.87	\$30,745

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Daylighting controls	Existing	1.01	\$3,422
Delamping	Existing	1.03	\$188,263
Energy efficient exit signs	Existing	1.33	\$5,989
Evaporative fan controls	Existing	1.01	\$19,517
Hard Wire CFL	Existing	1.04	\$10,624
HIDs to T8/T5 - Exterior	Existing	2.47	\$34,039
HIDs to T8/T5 - Interior	Existing	2.42	\$39,667
High Efficiency Evaporator Fan Motors (ECM)	Existing	1.68	\$14,221
High Efficiency Evaporator Fan Motors (PSC)	Existing	1.99	\$1,032
Integral Screw In CFL	Existing	1.37	\$44,935
Occupancy sensors	Existing	1.30	\$16,562
Programmable Thermostats	Existing	3.38	\$179,221
Screw in cold cathode CFL	Existing	0.97	\$607
Standard T8 Lighting	Existing	0.55	\$39,112
Strip Curtains	Existing	2.85	\$1,494
Variable Speed Drives	Existing	2.04	\$36,209

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APPENDIX 1-B (Proposed)

Programs and Measures	Status	Staff's Benefit-Cost Ratio	Total Incentives
Appliance Recycling Program			
Freezer Recycling	Proposed	2.27	\$9,000
Refrigerator Recycling	Proposed	2.27	\$81,000
Behavioral Comprehensive			
CFL Outreach Promotion (13W CFLs)	Proposed	1.85	\$49,200
Direct Canvassing Kit	Proposed	1.88	\$24,600
Bid for Efficiency Program			
Bid for Efficiency	Proposed	1.52	\$60,000
C&I Comprehensive Program			
Advanced Power Strips - Occupancy Sensors	Proposed	1.02	\$750
Advanced Power Strips - Timer Plug Strip	Proposed	3.05	\$750
Advanced Power Strips - Load Sensor	Proposed	1.31	\$750
Beverage Ctrls ("vending miser")	Proposed	2.50	\$10,000
CO Sensors	Proposed	3.28	\$5,000
CO2 Sensors	Proposed	1.03	\$4,000
Coin Operated Washers Advanced (Proposed)	Proposed	1.79	\$0
Coin Operated Washers (Proposed)	Proposed	2.70	\$6,250
Coin Operated Washers (Proposed)	Proposed	2.40	\$6,250
Coin Operated Washers (Proposed)	Proposed	2.78	\$6,250
Cooling Tower Subcooling	Proposed	0.77	\$1,000
Economizers	Proposed	4.95	\$200
Efficient Compressors	Proposed	2.77	\$240
Efficient Condensers	Proposed	1.90	\$60
EMS - Lighting Schedule	Proposed	0.84	\$5,000
EMS - HVAC and Cold Deck Reset	Proposed	1.33	\$78
Floating Head Pressure Controls	Proposed	4.72	\$400
Green Motor Rewind	Proposed	1.00	\$13
Heat Pump Water Heaters - Tier 1	Proposed	1.53	\$2,400
Heat Pump Water Heaters - Tier 2	Proposed	1.15	\$0
Evaporative fan controls	Proposed	1.11	\$750
High Perf Glazing	Proposed	0.97	\$38
HVAC System Test and Repair	Proposed	1.57	\$9,022
Variable Refrigerant Flow	Proposed	2.09	\$500
Hotel Room HVAC Control	Proposed	1.62	\$2,500
Induction Lighting	Proposed	1.15	\$140,560
LED Channel Signs	Proposed	0.78	\$38
LED Indoor Lights	Proposed	1.08	\$6,000
LED Traffic Lights	Proposed	1.19	\$2,500
Refrigeration LED Strip Lighting	Proposed	1.44	\$1,375
Canopy LED Lighting	Proposed	1.29	\$30,000
Computer Power Monitoring System	Proposed	1.92	\$16,000
Pulse Start Metal Halide - Interior	Proposed	1.01	\$7,500
Pulse Start Metal Halide - Exterior	Proposed	1.08	\$6,750
Outdoor CFL	Proposed	4.93	\$438
PTAC	Proposed	10.85	\$42
PTHP	Proposed	6.52	\$438
Refrigerated Display Automatic Door Closers	Proposed	2.91	\$400
Refrigerated Display Gaskets	Proposed	0.88	\$60
Shade Screens	Proposed	1.66	\$4,000
Snack Ctrls ("vending miser")	Proposed	1.17	\$33,750

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Window Films	Proposed	1.59	\$123
Combined Heat and Power Program			
Combined Heat and Power-Pilot	Proposed	6.66	\$0
Code Support			
Residential NC - Codes and Standards Support	Proposed	TBD	\$0
Motors - Codes and Standards Support	Proposed	TBD	\$0
General Service CFL's - Codes and Standards Support	Proposed	TBD	\$0
T-8's - Codes and Standards Support	Proposed	TBD	\$0
Conservation Voltage Reduction			
DREX 34	Proposed	3.74	\$0
DREX 35	Proposed	2.30	\$0
DREX 36	Proposed	3.93	\$0
DREX 44	Proposed	3.78	\$0
Efficient Products			
Advanced Power Strips - Load Sensor	Proposed	1.03	\$1,500
Pool Pump Timers	Proposed	2.28	\$0
Residential LED light	Proposed	1.44	\$22,120
Residential 2x Incandescent	Proposed	1.20	\$0
Heat Pump Water Heater - Residential	Proposed	0.87	\$0
ENERGY STAR Ceiling Fan	Proposed	1.12	\$3,000
ENERGY STAR Freezer	Proposed	1.88	\$250
ENERGY STAR Central Air Conditioner	Proposed	2.35	\$45,000
ENERGY STAR Clothes Washer	Proposed	1.17	\$20,000
ENERGY STAR Dishwasher	Proposed	3.23	\$1,500
ENERGY STAR Refrigerator	Proposed	1.44	\$2,019
ENERGY STAR Room Air Conditioner	Proposed	1.30	\$2,625
Water Heater Blanket	Proposed	2.45	\$1,100
Variable Spd Pool Pump	Proposed	1.23	\$50,000
Generation and Facilities Improvement Program			
Generation and Facilities Improvement	Proposed		\$0
Multi-Family Program			
ES Integral CFL	Proposed	2.23	\$13,032
Low Flow Showerheads - Electric WH only	Proposed	2.74	\$5,800
Faucet Aerators - Electric WH only	Proposed	3.67	\$1,936
Retro-Commissioning Program			
Retro-Commissioning	Proposed	2.46	\$88,000
Schools Facilities Program			
14 SEER Packaged and Split AC's	Proposed	1.08	\$2,190
14 SEER Packaged and Split HP's	Proposed	1.84	\$2,190
15 SEER Packaged and Split AC's	Proposed	1.02	\$4,388
15 SEER Packaged and Split HP's	Proposed	1.82	\$4,388
16 SEER Packaged and Split AC's	Proposed	0.96	\$6,596
16 SEER Packaged and Split HP's	Proposed	1.58	\$6,596
Advanced Power Strips - Timer Plug Strip	Proposed	2.67	\$1,291
Advanced Power Strips - Load Sensor	Proposed	1.25	\$714
Advanced Power Strips - Occupancy Sensors	Proposed	0.86	\$1,033
Beverage Ctrls ("vending miser")	Proposed	2.19	\$10,868
Custom Measures	Proposed	2.37	\$17,110
Daylighting controls	Proposed	1.07	\$24,639
Delamping	Proposed	4.12	\$15,248
Energy efficient exit signs	Proposed	1.41	\$3,881
Hard Wire CFL	Proposed	1.26	\$19,080

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HIDs to T8/T5 - Exterior	Proposed	2.70	\$36,763
HIDs to T8/T5 - Interior	Proposed	2.84	\$34,037
Induction Lighting	Proposed	1.45	\$1,524
Integral Screw In CFL	Proposed	1.68	\$4,035
LED Indoor Lights	Proposed	1.05	\$547
Occupancy sensors	Proposed	1.50	\$4,673
Outdoor CFL	Proposed	3.31	\$25,759
Premium T8 Lighting	Proposed	1.24	\$4,823
Programmable Thermostats	Proposed	2.71	\$191,965
Reach-in Cooler Controls ("vending miser")	Proposed	1.80	\$1,620
Reduced LPD	Proposed	1.09	\$1,408
Screw in cold cathode CFL	Proposed	2.18	\$2,622
Shade Screens	Proposed	1.47	\$106
Snack Ctrl ("Vending Miser")	Proposed	1.09	\$2,174
Standard T8 Lighting	Proposed	0.74	\$2,647
T8 to T8	Proposed	0.84	\$0
Variable Speed Drives	Proposed	2.10	\$78,029
Window Films	Proposed	1.64	\$42
Small Business Direct Install			
Advanced Power Strips - Occupancy Sensors	Proposed	0.82	\$213
Advanced Power Strips - Timer Plug Strip	Proposed	2.40	\$266
Advanced Power Strips - Load Sensor	Proposed	1.18	\$147
Beverage Ctrl ("vending miser")	Proposed	2.06	\$10,063
Induction Lighting	Proposed	1.03	\$2,824
LED Channel Signs	Proposed	0.75	\$308
LED Indoor Lights	Proposed	1.02	\$4,053
Outdoor CFL	Proposed	2.91	\$47,701
Premium T8 Lighting	Proposed	1.32	\$75,844
Reach-in Cooler Controls ("vending miser")	Proposed	1.71	\$3,750
Reduced LPD	Proposed	1.01	\$4,981
Refrigerated Display Automatic Door Closers	Proposed	2.32	\$11,047
Refrigerated Display Gaskets	Proposed	0.82	\$325
Shade Screens	Proposed	1.51	\$49
Snack Ctrl ("vending miser")	Proposed	1.07	\$1,006
Window Films	Proposed	1.68	\$29

Appendix 2, Measure Detail Description

Program Name	Measure Name	Description
Appliance Recycling	Freezer Recycling	Recycling of Freezers
Appliance Recycling	Refrigerator Recycling	Recycling of Refrigerators
Behavioral Comprehensive Program	CFL Outreach Promotion (13W CFLs)	Distribution of multiple CFLs in multiple sizes (average 13 W) at events, home shows, etc.
Behavioral Comprehensive Program	Community Education Kit	Distribution of kit including two 13 Watt CFLs, one bathroom aerator, one showerhead and one LED nite-lite at educational events
Behavioral Comprehensive Program	Direct Canvassing Kit	Distribution of two 13 W CFLs to each home during neighborhood canvassing
Behavioral Comprehensive Program	In Home Energy Display Pilot	This was a pilot residential direct load control project. Pilot ended and is no longer offered.
Behavioral Comprehensive Program	K-12 Education Kit	Student take home kits include one 18 Watt CFL, two 13 Watt CFL, one bathroom aerator, one low-flow shower head and one LED nite-lite.
Bid for Efficiency - Pilot	Bid for Efficiency	Commercial projects where customers submit bids to TEP on energy saving retro-fits and TEP grants the bid for incentive based on cost, savings, and timing of projects.
C&I Comprehensive Program	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	17 SEER Packaged and Split AC's	17 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	17 SEER Packaged and Split HP's	17 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	18 SEER Packaged and Split AC's	18 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	18 SEER Packaged and Split HP's	18 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued..
C&I Comprehensive Program	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with timer control.
C&I Comprehensive Program	Advanced Power Strips - Load Sensor	Advanced Power Strips with load sensor control.
C&I Comprehensive Program	Air Cooled Chillers < 150 tons	Install more efficient air cooled chillers units less than 150 tons
C&I Comprehensive Program	Air Cooled Chillers > 150 tons	Install more efficient air cooled chillers greater than 150 tons
C&I Comprehensive Program	Anti sweat heater controls	Anti Sweat heater controls cycle door heaters on and off to control condensation rather than having door heaters on all the time.
C&I Comprehensive Program	Beverage Ctrl's ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
C&I Comprehensive Program	CO Sensors	Carbon monoxide sensors that measure the amount of carbon monoxide in high occupancy areas

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		and cycle ventilation systems on and off based on need.
C&I Comprehensive Program	CO2 Sensors	Carbon dioxide sensors that measure the amount of carbon dioxide in high occupancy areas and cycle ventilation systems on and off based on need.
C&I Comprehensive Program	Coin Operated Washers Advanced (Proposed)	CEE Advanced Tier Energy Star with Modified Energy Factor 2.6
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 1/Energy Star with Modified Energy Factor 2.0
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 2/Energy Star with Modified Energy Factor 2.2
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 3/Energy Star with Modified Energy Factor 2.4
C&I Comprehensive Program	Cooling Tower Subcooling	Refrigerant Sub Cooling is a reliable energy-saving alternative to increasing the cooling capacity of air-conditioning systems, refrigeration systems, and most anything that uses refrigerant. These units reduce the condenser energy consumption.
C&I Comprehensive Program	Custom Measures	EE measures chosen by a customer and contractor to reduce energy in a commercial facility that are not prescriptive measures. Each project includes detailed cost-effectiveness test (SCT) that must exceed 1.0.
C&I Comprehensive Program	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.
C&I Comprehensive Program	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
C&I Comprehensive Program	Economizers	Controls installed on commercial HVAC to allow use of outside air when conditions are right to replace use of mechanical refrigeration.
C&I Comprehensive Program	EER Rated Packaged AC (< 5 tons , 11.36 EER)	Installation of high-efficiency EER Rated (3-Phase) air conditioners and heat pumps which exceed the minimum federal efficiency standard. Decision No. 70403 (7/3/2008) approved these measures.
C&I Comprehensive Program	EER Rated Packaged AC (> 20tons , 10.9 EER)	
C&I Comprehensive Program	EER Rated Packaged AC (11.5 - 20 tons , 11.24 EER)	
C&I Comprehensive Program	EER Rated Packaged AC (5.4 - 11.25 tons , 11.36 EER)	
C&I Comprehensive Program	EER Rated Packaged HP (< 5 tons , 11.36 EER)	
C&I Comprehensive Program	EER Rated Packaged HP (> 20 tons , 11.11 EER)	
C&I Comprehensive Program	EER Rated Packaged HP (11.25 - 20 tons , 11.02 EER)	
C&I Comprehensive Program	EER Rated Packaged HP (5.4 - 11.25 tons , 11.31 EER)	
C&I Comprehensive Program	Efficient Compressors	
C&I Comprehensive Program	Efficient Condensers	
C&I Comprehensive Program	EMS - Lighting Schedule	Installation of high efficiency compressors for refrigeration units.
C&I Comprehensive Program	EMS - HVAC and Cold Deck Reset	Installation of high efficiency condensers for refrigeration units.
		Installation of Lighting Energy Management Systems to control lighting operation in a large facility.
		Replacement of thermostats or pneumatic controls to maximize savings from installation of EMS

		lighting energy management system.
C&I Comprehensive Program	Energy efficient exit signs	Installation of CFL, LED or Electroluminescent exit signs.
C&I Comprehensive Program	Energy efficient ODP motors	Installation of high efficiency Open Drip-proof motors
C&I Comprehensive Program	Energy Efficient TEFC Motors	Installation of high efficiency Totally Enclosed Fan Cooled motors
C&I Comprehensive Program	Floating Head Pressure Controls	Floating head pressure control minimizes compressor operation in refrigeration equipment by lowering condensing temperatures.
C&I Comprehensive Program	Green Motor Rewind	Promoting the Green Motor Rewind to bring old motors back to their original efficiency during a re-wind rather than accepting a lesser re-wind option that results in up to a 7% drop in efficiency.
C&I Comprehensive Program	Heat Pump Water Heaters - Tier 1	This measure promotes installation of Heat Pump Water heaters with 2.35 COP
C&I Comprehensive Program	Heat Pump Water Heaters - Tier 2	This measure promotes installation of Heat Pump Water heaters with 2.51 COP.
C&I Comprehensive Program	HIDs to T8/T5 - Exterior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
C&I Comprehensive Program	HIDs to T8/T5 - Interior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (PSC)	Installation of high efficiency permanent split capacitor motors.
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (ECM)	Installation of high efficiency electronically communicated motors
C&I Comprehensive Program	Evaporative fan controls	Installation of controls to cycle evaporative fans on and off based on load in commercial walk-in refrigerators and freezers.
C&I Comprehensive Program	High Efficiency Ice Makers	Installation of high efficiency ice makers to replace standard efficiency units in commercial applications.
C&I Comprehensive Program	High Efficiency Reach-in Refrigerators and Freezers	Installation of high efficiency reach-in refrigerators and freezers to replace standard efficiency units in commercial applications.
C&I Comprehensive Program	High Perf Glazing	Installation of high-performance Low-E window systems in commercial applications.
C&I Comprehensive Program	HVAC System Test and Repair	Promoting the quality installation of HVAC Systems to assure systems operate at rated efficiency.
C&I Comprehensive Program	Variable Refrigerant Flow	Installation of variable refrigerant flow systems which vary HVAC capacity based on actual load.
C&I Comprehensive Program	Hotel Room HVAC Control	Installation of controls on hotel room HVAC to turn systems off or adjust temperature when the room is unoccupied.
C&I Comprehensive Program	Induction Lighting	High Efficiency Lighting retrofit for hard to reach areas where long life is desirable.
C&I Comprehensive Program	Integral Screw In CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
C&I Comprehensive Program	Hard Wire CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
C&I Comprehensive Program	LED Channel Signs	Installation of LED Channel signs to replace incandescent or fluorescent lamps.
C&I Comprehensive Program	LED Indoor Lights	Installation of LED to replace incandescent or fluorescent lamps
C&I Comprehensive Program	LED Pedestrian Signals	Installation of LED to replace incandescent or fluorescent lamps in pedestrian signals. Not cost-effective and will not be offered at this time.

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C&I Comprehensive Program	LED Street and Parking Lights	Installation of LED to replace incandescent or fluorescent lamps in Street and parking lights. Measure is not cost-effective and will not be offered at this time.
C&I Comprehensive Program	LED Traffic Lights	Installation of LED to replace incandescent or fluorescent lamps in Traffic lights
C&I Comprehensive Program	Bi-Level Lighting	Installing lighting systems capable of providing multiple lighting levels. Measure is not cost effective and will not be offered at this time.
C&I Comprehensive Program	Refrigeration LED Strip Lighting	Installing LED strip lighting to replace fluorescent in refrigerated cases
C&I Comprehensive Program	Canopy LED Lighting	Installing LED lighting to replace fluorescent or HID in canopy fixtures
C&I Comprehensive Program	Computer Power Monitoring System	Installing controls to vary use of computers and corresponding equipment during unoccupied hours.
C&I Comprehensive Program	Pulse Start Metal Halide - Interior	Installing metal halide lamps with electronic starting currents or Pulse Start.
C&I Comprehensive Program	Pulse Start Metal Halide - Exterior	Installing metal halide lamps with electronic starting currents or Pulse Start.
C&I Comprehensive Program	Night Covers	Installation of covers over open refrigerated cases at night to maintain temperature in case. This measure is not cost-effective and will not be offered in TEP's program.
C&I Comprehensive Program	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
C&I Comprehensive Program	Outdoor CFL	Installation of CFLs in outdoor applications
C&I Comprehensive Program	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
C&I Comprehensive Program	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day. This is a good measure because costs are low and savings are high.
C&I Comprehensive Program	PTAC	Installation of packaged-terminal air conditioners that exceed the federal minimum standard efficiency. These units are used in hotels, resorts, hospitals, etc.
C&I Comprehensive Program	PTHP	Installation of packaged-terminal heat pumps that exceed the federal minimum standard efficiency. These units are used in hotels, resorts, hospitals, etc.
C&I Comprehensive Program	Refrigerated Display Automatic Door Closers	Installing automatic door closers on refrigerated display case doors.
C&I Comprehensive Program	Refrigerated Display Gaskets	Installing new gaskets on refrigerated display case doors.
C&I Comprehensive Program	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
C&I Comprehensive Program	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
C&I Comprehensive Program	Snack Ctrls ("vending miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
C&I Comprehensive Program	Reach-In Cooler Controls ("Cool miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
C&I Comprehensive Program	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
C&I Comprehensive Program	Strip Curtains	Installing strip curtains to doors in walk-in refrigerators and freezers
C&I Comprehensive Program	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. This measure is not cost-effective and will not be offered in TEP's.
C&I Comprehensive Program	Variable Speed Drives	Installing variable speed drives to vary energy use for motors based on actual load.
C&I Comprehensive Program	Variable Speed Screw Compressor	Installing variable speed air compressors to reduce energy use.
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal <	Install more efficient water cooled centrifugal chillers less than 150 tons

	150 tons	
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal > 300 tons	Install more efficient water cooled centrifugal chillers greater than 300 tons
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal 151 - 299 tons	Install more efficient water cooled centrifugal chillers between 151 and 299 tons
C&I Comprehensive Program	Water Cooled Chillers - Reciprocating All Sizes	Install more efficient water cooled reciprocating chillers.
C&I Comprehensive Program	Water Cooled Chillers - Screw < 150 tons	Install more efficient water cooled screw chillers less than 150 tons
C&I Comprehensive Program	Water Cooled Chillers - Screw > 300 tons	Install more efficient water cooled screw chillers greater than 300 tons
C&I Comprehensive Program	Water Cooled Chillers - Screw 151 - 299 tons	Install more efficient water cooled screw chillers between 151 and 299 tons
C&I Comprehensive Program	Window Films	Install window film to reduce heat entering glass from direct sunlight
CHP Joint Program - Pilot	Combined Heat and Power	Promote option of installing system to use waste heat from other gas measures for electrical power production.
Codes Support	Residential NC - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher construction standards in commercial facilities.
Codes Support	Motors - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher efficiency standards for motors.
Codes Support	General Service CFL's - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher efficiency standards for CFL's.
Codes Support	T-8's - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher efficiency standards for fluorescent lamps.
Conservation Voltage Reduction	DREX 34	Initiate voltage reduction protocol at Drexel substation on feeder 34
Conservation Voltage Reduction	DREX 35	Initiate voltage reduction protocol at Drexel substation on feeder 35
Conservation Voltage Reduction	DREX 36	Initiate voltage reduction protocol at Drexel substation on feeder 36
Conservation Voltage Reduction	DREX 44	Initiate voltage reduction protocol at Drexel substation on feeder 44
Commercial Direct Load Control	Direct Load Control for Large Commercial	Promote direct load control for large commercial customers as a guaranteed capacity contract.
Commercial New Construction	Design Assistance Incentives to Design teams	Provide incentive to engineering firms completing design of new commercial buildings to encourage them to evaluate both standard code-built facilities and an energy efficient option.
Commercial New Construction	EER Rated Packaged AC (> 20tons, 10.9 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction	EER Rated Packaged AC (11.5 - 20 tons, 11.24 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction	EER Rated Packaged AC (5.4 - 11.25 tons, 11.36 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction	High Perf Glazing	Install energy efficient low-e glass systems in commercial new construction as part of the overall design.

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Commercial New Construction	Performance Rebates	Pay incentives for the energy efficient design of a commercial facility including envelope, windows, lighting, motors, and hvac. Detailed energy simulations must be submitted showing a standard design versus the energy efficient design and inspections are completed to verify installation of EE equipment.
Efficient Products	Advanced Power Strips - Load Sensor	Install advanced power strips-load sensors for control of electronics in residential application.
Efficient Products	ES Integral CFL	Install CFL lamps to replace incandescent.
Efficient Products	Pool Pump Timers	Install timers to control operation of pool pump.
Efficient Products	Residential LED light	Install energy efficient LED lamps to replace incandescent lamps.
Efficient Products	Residential 2x Incandescent	Install 2x incandescent lamps to replace standard incandescent lamps.
Efficient Products	Heat Pump Water Heater - Residential	Install heat pump water heater with 2.35 COP to replace standard electric units.
Efficient Products	ENERGY STAR Ceiling Fan	Install energy efficient Energy Star Rated ceiling fan to replace standard units.
Efficient Products	ENERGY STAR Freezer	Install energy efficient Energy Star Rated Freezer to replace standard units.
Efficient Products	ENERGY STAR Central Air Conditioner	Install energy efficient Energy Star Rated central air conditioner to replace standard units.
Efficient Products	ENERGY STAR Clothes Washer	Install energy efficient Energy Star Rated clothes washer to replace standard units.
Efficient Products	ENERGY STAR Dishwasher	Install energy efficient Energy Star Rated dishwasher to replace standard units.
Efficient Products	ENERGY STAR Refrigerator	Install energy efficient Energy Star Rated refrigerator to replace standard units.
Efficient Products	ENERGY STAR Room Air Conditioner	Install energy efficient Energy Star Rated room air conditioner to replace standard units.
Efficient Products	Water Heater Blanket	Install water heater blanket on electric water heater to reduce heat loss from tank.
Efficient Products	Variable Spd Pool Pump	Install high efficiency variable speed pool pump to replace single speed pool pumps.
Existing Homes and Audit Direct Install	DTR _{≥14%} Reduction leakage (All electric)	Duct testing and repair netting a minimum of 14% reduction in leakage on electric heat pumps. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	DTR _{≥14%} Reduction leakage (Dual fuel)	Duct testing and repair netting a minimum of 14% reduction in leakage on air conditioners. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	DTR _{≥50%} Reduction leakage (All electric)	Duct testing and repair netting a minimum of 50% reduction in leakage on electric heat pumps. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	DTR _{≥50%} Reduction leakage (Dual fuel)	Duct testing and repair netting a minimum of 50% reduction in leakage on air conditioners. Since air conditioners only use electricity for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR _{≥14%} Reduction leakage (All electric)	Early retirement of an old inefficient heat pump combined with duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR _{≥14%}	Early retirement of an old inefficient air conditioner combined with duct testing and repair netting

	Reduction leakage (Dual fuel)	a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥ 50% Reduction leakage (All electric)	Early retirement of an old inefficient heat pump combined with duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥ 50% Reduction leakage (Dual fuel)	Early retirement of an old inefficient air conditioner combined with duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC with QI (All electric)	Early retirement of an old inefficient heat pump combined with quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC with QI (Dual fuel)	Early retirement of an old inefficient air conditioner combined with quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since air conditioners use electricity for only cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥ 14% Reduction leakage (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥ 14% Reduction leakage (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥ 50% Reduction leakage (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥ 50% Reduction leakage (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC/QI (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited

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		to quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC/QI (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	Screw in CFL - Direct Install from Audit	Installation of up to ten 13 Watt CFLs to replace standard incandescent lamps during an energy assessment of a customer energy bill.
Existing Homes and Audit Direct Install	Behavioral changes resulting from Energy Assessments	Energy savings resulting from an improvement in usage patterns, maintenance or replacement with more efficient options for electric appliances after education is provided to the customer.
Generation and Facilities Improvement	Generation and Facilities Improvement	The utility chooses to pay a higher cost to install more efficient generation equipment or more efficient facilities improvements in its own facilities.
Home Energy Reports	Home Energy Reports	Delivery of reports comparing a customer's energy use to neighbors to show how they compare. This program also provided a set of low or no cost steps the customer could consider to reduce energy consumption. This program is not cost-effective through the original delivery channel.
Low Income Weatherization	Low Income Weatherization	Installation of various energy efficiency envelope, lighting and equipment options in low-income homes.
Multi-Family	ES Integral CFL	Installation of CFLs to replace incandescent lamps in apartments.
Multi-Family	Low Flow Showerheads - Electric WH only	Installation of low flow showerheads in apartments (electric water heating only)
Multi-Family	Faucet Aerators - Electric WH only	Installation of low flow faucet aerators in apartments (electric water heating only)
Res. New Construction	ENERGY Smart Homes (All Electric)	New construction standards that meet or exceed Energy Star v-3 standards. Homes must be tested with a HERS 65 or lower to qualify. Homes with heat pumps show higher energy savings because heat pumps use electric for both heating and cooling.
Res. New Construction	ENERGY Smart Homes (Dual Fuel)	New construction standards that meet or exceed Energy Star v-3 standards. Homes must be tested with a HERS 65 or lower to qualify. Homes with air conditioners show lower energy savings because air conditioners use electric only for cooling.
Res. New Construction	ENERGY Smart Homes - Tier 2 (All Electric)	Tier 2 disallowed by Decision No. 71638 (4/14/10)
Res. New Construction	ENERGY Smart Homes - Tier 2 (Dual Fuel)	Tier 2 disallowed by Decision No. 71638 (4/14/10)
Res. New Construction	ENERGY Smart Homes - Tier 3	Tier 3 disallowed by Decision No. 71638 (4/14/10)
Residential Direct Load Control - Pilot	Direct Load Control for Residential	Pilot program ended in 2013.
Residential Direct Load Control - Pilot	Direct Load Control for Small Commercial	Pilot program ended in 2013.
Retro-Commissioning	Retro-Commissioning	Contracting with an energy service provider to modify schedules and repair equipment to bring it back to 'like new' condition.

Schools Facilities	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in schools.
Schools Facilities	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in schools
Schools Facilities	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in schools.
Schools Facilities	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with occupancy sensor control.
Schools Facilities	Advanced Power Strips - Load Sensor	Advanced Power Strips with timer control.
Schools Facilities	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued.
Schools Facilities	Beverage Ctrls ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
Schools Facilities	Custom Measures	EE measures chosen by a customer and contractor to reduce energy in a commercial facility that are not prescriptive measures. Each project includes detailed cost-effectiveness test (SCT) that must exceed 1.0.
Schools Facilities	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.
Schools Facilities	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Schools Facilities	Energy efficient exit signs	Installation of CFL, LED or Electroluminescent exit signs.
Schools Facilities	Hard Wire CFL	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Schools Facilities	HIDs to T8/T5 - Exterior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
Schools Facilities	HIDs to T8/T5 - Interior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.
Schools Facilities	Induction Lighting	High Efficiency Lighting retro-fit for hard to reach areas where long life is desirable.
Schools Facilities	Integral Screw In CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
Schools Facilities	LED Indoor Lights	Installation of LED to replace incandescent or fluorescent lamps.
Schools Facilities	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
Schools Facilities	Outdoor CFL	Installation of CFLs in outdoor applications
Schools Facilities	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
Schools Facilities	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day.
Schools Facilities	Reach-in Cooler Controls ("vending miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
Schools Facilities	Reduced LPD	Reducing the lighting power density - similar to delamping.

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Schools Facilities	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
Schools Facilities	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
Schools Facilities	Snack Ctrls ("Vending Miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
Schools Facilities	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
Schools Facilities	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. Discontinued.
Schools Facilities	Variable Speed Drives	Installing variable speed drives to reduce speed and energy use for motors.
Schools Facilities	Window Films	Install window film to reduce heat entering glass from direct sunlight
Shade Tree	Shade Tree	Installing low-water use desert adapted shade trees in specified locations to shade roof and walls in residential buildings.
Small Business Direct Install	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued.
Small Business Direct Install	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with timer control.
Small Business Direct Install	Advanced Power Strips - Load Sensor	Advanced Power Strips with load sensor control.
Small Business Direct Install	Anti sweat heater controls	Anti Sweat heater controls cycle door heaters on and off to control condensation rather than having door heaters on all the time.
Small Business Direct Install	Beverage Ctrls ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
Small Business Direct Install	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.
Small Business Direct Install	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps. This is a good measure because there is very little cost but savings are high.
Small Business Direct Install	Energy efficient exit signs	Installation of CFL, LED or Electroluminescent exit signs.
Small Business Direct Install	Evaporative fan controls	Installing controls on evaporative fans in refrigerated cases to limit operation based on need.
Small Business Direct Install	Hard Wire CFL	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Small Business Direct Install	HIDs to T8/T5 - Exterior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
Small Business Direct Install	HIDs to T8/T5 - Interior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.

Small Business Direct Install	High Efficiency Evaporator Fan Motors (ECM)	Installation of high efficiency electronically communicated motors
Small Business Direct Install	High Efficiency Evaporator Fan Motors (PSC)	Installation of high efficiency permanent split capacitor motors.
Small Business Direct Install	Induction Lighting	High Efficiency Lighting retro-fit for hard to reach areas where long life is desirable.
Small Business Direct Install	Integral Screw In CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
Small Business Direct Install	LED Channel Signs	Installation of LED Channel signs to replace incandescent or fluorescent lamps
Small Business Direct Install	LED Indoor Lights	Installation of LED to replace incandescent or fluorescent lamps.
Small Business Direct Install	Night Covers	Installation of covers over open refrigerated cases at night to maintain temperature in case. Discontinued.
Small Business Direct Install	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
Small Business Direct Install	Outdoor CFL	Installation of CFLs in outdoor applications.
Small Business Direct Install	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
Small Business Direct Install	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day.
Small Business Direct Install	Reach-in Cooler Controls ("vending miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
Small Business Direct Install	Reduced LPD	Reducing the lighting power density - similar to delamping.
Small Business Direct Install	Refrigerated Display Automatic Door Closers	Installing automatic door closers on refrigerated display case doors.
Small Business Direct Install	Refrigerated Display Gaskets	Installing new gaskets on refrigerated display case doors.
Small Business Direct Install	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
Small Business Direct Install	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
Small Business Direct Install	Snack Ctrls ("vending miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
Small Business Direct Install	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
Small Business Direct Install	Strip Curtains	Installing strip curtains to doors in walk-in refrigerators and freezers
Small Business Direct Install	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. Discontinued.
Small Business Direct Install	Variable Speed Drives	Installing variable speed drives to reduce speed and energy use for motors.
Small Business Direct Install	Window Films	Install window film to reduce heat entering glass from direct sunlight

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Appendix 3, Approving Decisions and Benefit-Cost Ratios, Existing Measures

Program Name on 2014 Design Tool Measure Name on 2014 Design Tool (REVISED 2014-07-15)	Staffs B/C	Original Decision to App Date of Approval
C&I Comprehensive Program	15 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	15 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	16 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	16 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	17 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	17 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	18 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	18 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost
C&I Comprehensive Program	Air Cooled Chillers < 150 tons	1.17 No. 70403
C&I Comprehensive Program	Air Cooled Chillers > 150 tons	1.17 No. 70403
C&I Comprehensive Program	Anti sweat heater controls	2.8 No. 70403
C&I Comprehensive Program	Beverage Ctrls ("vending miser")	2.28 No. 70403
C&I Comprehensive Program	EER Rated Packaged AC (5.4 - 11.25 tons, 11.36 EER)	No. 70403 & 71836
C&I Comprehensive Program	EER Rated Packaged HP (< 5 tons, 11.36 EER)	No. 71836
C&I Comprehensive Program	EER Rated Packaged HP (> 20 tons, 11.11 EER)	No. 70403 & 71836
C&I Comprehensive Program	EER Rated Packaged HP (11.25 - 20 tons, 11.02 EER)	No. 70403 & 71836
C&I Comprehensive Program	EER Rated Packaged HP (5.4 - 11.25 tons, 11.31 EER)	No. 70403 & 71836
C&I Comprehensive Program	Energy efficient exit signs	1.82 No. 70403
C&I Comprehensive Program	Energy efficient ODP motors	1.33 No. 70403
C&I Comprehensive Program	Energy Efficient TEFC Motors	0.98 No. 70403
C&I Comprehensive Program	HIDs to T8/T5 - Exterior	1.77 No. 70403
C&I Comprehensive Program	HIDs to T8/T5 - Interior	1.77 No. 70403
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (PSC)	5.55 No. 70403
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (ECM)	5.55 No. 70403
C&I Comprehensive Program	High Efficiency Ice Makers	1.74 No. 70403
C&I Comprehensive Program	High Efficiency Reach-in Refrigerators and Freezers	1.51 No. 70403
C&I Comprehensive Program	Integral Screw In CFL	3.71 No. 70403
C&I Comprehensive Program	Hard Wire CFL	3.71 No. 70403
C&I Comprehensive Program	Night Covers	2.52 No. 70403
C&I Comprehensive Program	Occupancy sensors	4.26 No. 70403
C&I Comprehensive Program	Outdoor CFL	4.11 No. 70403
C&I Comprehensive Program	Premium T8 Lighting	1.77 No. 70403
C&I Comprehensive Program	Programmable Thermostats	9.84 No. 70403
C&I Comprehensive Program	Screw in cold cathode CFL	1.37 No. 70403
C&I Comprehensive Program	Snack Ctrls ("vending miser")	2.28 No. 70403
C&I Comprehensive Program	Reach-in Cooler Controls ("Cool miser")	2.28 No. 70403
C&I Comprehensive Program	Standard T8 Lighting	1.77 No. 70403
C&I Comprehensive Program	Strip Curtains	2.52 No. 70403
C&I Comprehensive Program	T8 to T8	
C&I Comprehensive Program	Variable Speed Drives	2.78 No. 70403

39632

C&I Comprehensive Program	Variable Speed Screw Compressor	1.59 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal < 150 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal > 300 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal 151 - 299 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Reciprocating All Sizes	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Screw < 150 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Screw > 300 tons	1.62 No. 70403	39632
Commercial Direct Load Control	Water Cooled Chillers - Screw 151 - 299 tons	1.62 No. 70403	39632
Commercial New Construction	Direct Load Control for Large Commercial	2.47 No. 71787	40371
Commercial New Construction	Design Assistance Incentives to Design teams	1.18 No. 70459	39666
Efficient Products	Performance Rebates	1.18 No. 70459	39666
Existing Homes and Audit Direct In: Air Sealing (All electric)	ES Integral CFL	1.6 No. 70383	39612
Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (All electric)		0.99 No. 72028	40522
Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (Dual fuel)		1.09 No. 72028	40522
Existing Homes and Audit Direct In: Shade Screens		1.09 No. 72028	40522
Existing Homes and Audit Direct In: DTR ≥14% Reduction leakage (All electric)		0.89 No. 72029	40523
Existing Homes and Audit Direct In: DTR ≥14% Reduction leakage (Dual fuel)		0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR ≥50% Reduction leakage (All electric)		0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR ≥50% Reduction leakage (All electric)		0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR ≥50% Reduction leakage (Dual fuel)		0.95 No. 72028	40522
Existing Homes and Audit Direct In: Duct Sealing (Prescriptive)		0.95 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (All electric)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (All electric)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (All electric)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC with QI (All electric)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC with QI (Dual fuel)		1.27 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (All electric)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (All electric)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (All electric)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC/QI (All electric)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC/QI (Dual fuel)		1.07 No. 72028	40522
Existing Homes and Audit Direct In: Screw In CFL - Direct Install from Audit		1.06 No. 72063	40549
Existing Homes and Audit Direct In: Behavioral changes resulting from Energy Assessments		1.07 No. 72063	40549
Home Energy Reports	Home Energy Reports	1.07 No. 72063	40549
Low Income Weatherization	Low Income Weatherization	1.47 No. 72254	40640
Res. New Construction	ENERGY Smart Homes (All Electric)	0.97 No. 70456	39666
Res. New Construction	ENERGY Smart Homes (Dual Fuel)	1.15 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 2 (All Electric)	1.15 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 2 (Dual Fuel)	0.075 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 3	0.075 No. 71638	40282
Residential Direct Load Control - PII Direct Load Control for Residential		0.075 No. 71638	40282
Residential Direct Load Control - PII Direct Load Control for Small Commercial		1.39 No. 71846	40415
Shade Tree	Shade Tree	1.3 No. 71846	40415
		3.14 No. 70455	39666

Small Business Direct Install	14 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	14 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	15 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	15 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	16 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	16 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	Anti sweat heater controls	1.46 No. 70457	39666
Small Business Direct Install	Delamping	2.13 No. 70457	39666
Small Business Direct Install	Energy efficient exit signs	1.42 No. 70457	39666
Small Business Direct Install	Evaporative fan controls	2.76 No. 70457	39666
Small Business Direct Install	High Efficiency Evaporator Fan Motors (ECM)	3.62 No. 70457	39666
Small Business Direct Install	High Efficiency Evaporator Fan Motors (PSC)	3.62 No. 70457	39666
Small Business Direct Install	Integral Screw In CFL	1.04 No. 70457	39666
Small Business Direct Install	Occupancy sensors	4.3 No. 70457	39666
Small Business Direct Install	Premium T8 Lighting	1.53 No. 70457	39666
Small Business Direct Install	Programmable Thermostats	3.52 No. 70457	39666
Small Business Direct Install	Screw in cold cathode CFL	1.37 No. 70457	39666
Small Business Direct Install	Standard T8 Lighting	1.53 No. 70457	39666

Decision No. _____